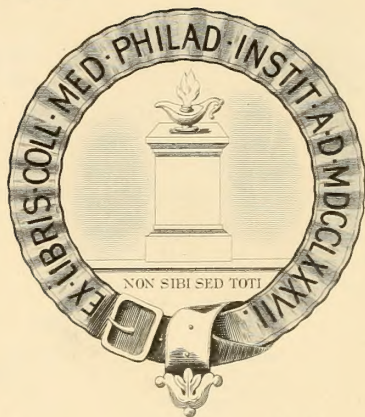




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THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

CHRONIC PNEUMONIA, FIBROID PHTHISIS, INDURATION OF LUNG, SCHLEROSIS OF LUNG, PULMONARY FIBROSIS.*

BY DR. ED. SMITH.

In considering the disease we should divide the cases into two classes:

1st. Those cases that can be traced back as a continuation from an attack of an acute lobar pneumonia.

2nd. Those cases in which thickening of alveoli and induration has taken place. In those of the first class or those following the acute pneumonia, we always find the disease unilateral; we find the lung in very much the same condition as in the acute attack, the principal change being the lung becomes more firm and resistant drier, and perhaps a little more pale.

The symptoms in the early beginning of chronic pneumonia are similar to those of the acute disease in a somewhat modified form. Pyrexia is usually present, but does not attain the same height as in the acute attack, nor is the fever regular or constant, but is liable to assume the hectic character followed by night sweats; the pulse and respiration are accelerated, and cough is commonly present in varying intensity—sometimes slight and at other times frequent and troublesome. If the cough is frequent it is liable to excite the pain in the side that was present in the acute stage, the appetite remains poor and

* Read before the Muldraugh Hill Medical Society, at Elizabethtown, Ky., August 10th, 1903.

the patient fails to gain the strength that he should. The physical signs are those of the acute disease, such as dullness on percussion, increased vocal fremitus, bronchial breathing and a want of expansion on the affected side.

The second variety of the disease is really the type that should be classified as chronic pneumonia proper. In these cases we have a chronic productive inflammation of the lungs, which involves the walls of the alveoli and connective tissue with the formation of fibrous tissue, which eventually results in obliteration of the air cells, in turn followed by contraction of the affected lung. This form of the disease frequently results from an acute or sub-acute broncho-pneumonia from the fact that it is often prolonged in its course and that dilated bronchi is a common accompaniment of the disease, which favors a continuance of the catarrhal process by rendering the secretion more difficult to remove which accumulates in the cavities and bronchial tubes, and keeps up the irritation, which after awhile results in induration of the lung. In every case of broncho-pneumonia where resolution fails to set in after the usual allotted time, especially in children, chronic pneumonia should be thought of as the probable cause of the delayed resolution.

Chronic bronchitis is often a factor in the production of the disease. Here again we often have bronchiectasis, which favors the development of fibrous tissue. It may also excite a dry pleurisy, which is followed by adhesion to the lung, with thickening and formation of fibrous bonds, which may extend to a greater or less depth into the lung tissue.

Persons who are compelled, by reason of occupation, to breathe habitually air which is laden with particles of dust of various kinds, as occurs in the case of coal miners, stonecutters, coal burners, knife grinders, etc., are liable to suffer from chronic pneumonia. The dust, being constantly inhaled, the secretion fails to dislodge every particle of it, a certain residue remains in the bronchial tubes, and finally becomes imbedded in the walls of the tubes and alveoli, which after awhile sets up enough irritation to cause an overgrowth of new connective tissue.

Organic heart disease, especially mitral regurgitation, often leads to the development of a chronic pneumonia. In this condition the left auricle is rarely ever empty; consequently the pulmonary veins remain full, with consequent congestion of lungs; the long continuance of the congestion sets up a chronic inflammation, with thickening and

induration.

The symptoms present in a case of chronic pneumonia are largely those of the antecedent disease, these cases being in almost every instance secondary. Respiration is more or less frequent, depending upon the amount of damage done to the diseased lung. Dyspnea is often slight or wanting in the earlier stages of the disease, but as the case advances, and especially upon exertion, it becomes pronounced. Hemoptysis is a common symptom, occurring in nearly one-half the cases. It is usually moderate, but it often may be a source of serious danger. It occurs as the result of ulceration going on in the dilated bronchi and cavities.

Lividity of face, amounting in some cases almost to cyanosis, may be present. This generally indicates some involvement of the heart. Cough is nearly always present, and is often very persistent. It may be dry, but more frequently it is attended by a very decided amount of expectoration.

Sputum, when present, often varies in its character; it may be mucous, muco-pus, or, if mingled with blood, take on the brick dust character, or small black spots, due to the presence of blood, may occur in the sputum. The sputum is often fetid, as is also the patient's breath.

Fever may be absent, but generally occurs at irregular intervals during the progress of the disease. However, in a few cases, the entire course may be passed without almost any perceptible fever, while a few cases close the scene with a very decided increase of temperature.

Dropsy, when it occurs, is nearly always confined to the lower extremities, but in case the heart is involved it may become general.

Physical signs are not the same in every case, depending, as they do, on the varying conditions of the lung present in each individual case. The lung is found contracted, and may be completely or partially solidified; it may contain dilated bronchi or cavities, and these may vary in size and location, may be deep or superficial, there may be only a few or several cavities; these may contain a small or large amount of secretion; hence the physical signs are thus modified.

Bronchial or broncho-vesicular breathing, and if cavities exist cavernous and sometimes amphoric breathing; dullness on percussion, amounting in some cases to flatness except over cavities, when it may be tympanitic or amphoric. Rales are usually present of the mucous

and sub-mucous varieties are usually present.

Chronic pneumonia is liable to be confounded with pleurisy with effusion, pleurisy with retraction, collapse of the lung, cancer of the lung, pulmonary tuberculosis. From pleurisy with effusion it will only be necessary to differentiate that form following acute lobar pneumonia. The well defined physical signs present in these cases leave but little room for doubt; the bronchial breathing, increased vocal fremitus, and the absence of bulging of intercostal spaces and absence of enlargement of the affected side, compared with the bulging of the intercostal spaces with displacement of the heart that occurs in very large effusions is usually sufficient for a clear diagnosis.

From pleurisy with retraction the diagnosis is not so easy, as there is retraction in both, but in pleurisy the retraction is accompanied by more twisting of the ribs upon their axis, with more falling of shoulder and tilting outward of the angle of the scapula, the retraction in chronic pneumonia being more uniform and a more general diminution of the affected side. Again, fetid expectoration, hemoptysis and fever may be present in chronic pneumonia, but never in pleurisy with retraction.

In cancer of lung, the history aids us very much. The line of percussion dullness extends across the median line, while in chronic pneumonia the sound lung is emphysematous, and encroaches upon the affected side. In cancer the hemoptysis is much more profuse, and the peculiar current jelly expectoration of cancer has not been known to occur in chronic pneumonia, pain is more frequent and severe, and the disease runs a much more rapid course, accompanied by involvement of the lymphatic glands, associated with the cachexia of malignant disease.

Collapse of the lung is rare. It is rare to have collapse of the entire lung except from the presence of a foreign body in the bronchus or from pressure of a thoracic tumor. Along with this we would likely have other pressure symptoms; this, in connection with absence of fever and other physical signs, would lead to the correct diagnosis. In pulmonary tuberculosis the disease is more progressive and rarely remains unilateral. Fetid sputum is rare in tuberculosis, but common in chronic pneumonia. If laryngeal and intestinal symptoms are present, it is largely in favor of tuberculosis.

The prognosis in cases following acute lobar pneumonia or acute broncho-pneumonia is not without hope. A great many of these cases can be restored to perfect health, but after the case has advanced to

the stage of thickening, attended by formation of fibrous tissue, there is no cure.

Treatment of those cases following directly the acute disease which have not yet reached the stage of induration will often respond to medical treatment; as long as the fever continues the patient should be kept quiet in bed, the strength should be maintained by a moderate use of stimulants and the judicious use of nourishing food adapted to the abilities of the patient's digestion. Alterative and nutritive tonics are to be recommended, among which the best is iodide of ammonium, combined with codliver oil or some of its preparations. The preparations of iron, arsenic and strychnine, in well selected cases, are to be recommended.

In the more chronic cases, or those classified as chronic pneumonia proper, it is well to understand that when fibrous tissue has once formed in the lung that we have no medicinal agents that will remove it; consequently our main object should be looking towards making our patient as comfortable as possible. He should dwell in a warm climate, where the temperature is uniform and dry; he should take a certain amount of systematic exercise in the open air; he should be warmly clad and sleep in well ventilated apartments, which are warm and comfortable; the general health of the patient should be maintained up to the highest possible standard by the administration of nutritive and digestive tonics. Food should be allowed in such quantities as to maintain the patient's strength and vigor.

HOOBENSVILLE, KY.

CATARRHAL PNEUMONIA.*

BY DR. J. L. ATKINSON.

In the consideration of the subject assigned, I can only follow the well-worn paths trodden by competent observers who have given us a clear conception of the pathology, etiology, symptoms and diagnosis of this morbid condition, and since the treatment must be symptomatic each practitioner will meet the symptoms as they present themselves with the best remedies at hand.

I fear that what I have to say will sound very trite because I have nothing new to offer, nothing to stimulate the interest of your wide awake faculties, which I feel are abreast with modern medical thought and ever seeking some new thing. I shall attempt only a brief resume

*Read before the Medical and Hill Medical Societies at Louisville, Ky., December 10th, 1894.

of the etiology, symptoms, diagnosis and treatment, with the hope that the discussion that will follow may give us all some new food for thought on this timely subject.

Andrew defines catarrhal pneumonia, broncho-pneumonia, capillary bronchitis, as an inflammation of the minute bronchi and air vesicles, due either to the extension of the inflammation from the capillary bronchi to the air vesicle, or to an inflammatory process set up in the atelectatic lobules. I think this definition complete, except that in rare instances the inflammation may set up in the vesicles that are not atelectatic.

ETIOLOGY.—The extremes of life give us an important predisposing cause, also the diseases incident to children are frequently predisposing factors and likewise chronic diseases are debilitating in the aged. The winter and spring seasons gives the greatest prevalence of the disease, though it may be met with at any season of the year as a complication of other diseases, especially those of an infectious nature, foreign matter inhaled, long retained bronchial secretions, pathogenic bacteria, as the bacillus of tuberculosis, streptococci, staphylococci, pneumococcus and others, are liable for many cases of catarrhal pneumonia. The condition may also become grafted on a chronic bronchitis, or the recumbent position, long continued, may lead to its development.

In this disease, or where there are symptoms of such affection, we should observe the symptoms closely, and examine carefully into the clinical history because the physical signs are not always well marked, and in the secondary cases, which are by far the most frequent, the pre-existing conditions may mask the symptoms, so that it is with much difficulty that a true diagnosis is made early.

The symptoms presented by a case of primary catarrhal pneumonia are those of severe acute bronchitis, plus more marked dyspnea, higher fever, more rapid pulse, greater pain and prostration; besides, in catarrhal pneumonia, the tenacious expectoration is frequently, in adults, mixed with blood, bright red in color, but not intimately mixed with the secretion.

The symptoms of secondary catarrhal pneumonia are the same as those enumerated above, except as modified by the associated disease. It seems to me that the principal diagnostic symptoms are the rapid pulse and respiration, with hard cough, somewhat painful, with expectoration, which may or may not be characteristic, and the physical signs of broncho-vesicular breathing and moist rales usually subcrepitant. The area of consolidation is most frequently small and rather difficult to locate, especially in young children, who do not often

submit quietly to a complete examination.

It is claimed that both lungs are usually affected, but I have found many exceptions to this rule. Catarrhal pneumonia is to be differentiated from simple bronchitis and lobar pneumonia. Sufficient has been said in regard to the points of difference from bronchitis, and by considering the differential signs between catarrhal and lobar pneumonia, we will rarely be mistaken in our diagnosis. The gradual onset, with fever developing in proportion to the extent of the inflammation, irregular in type, tenacious sputum, much dyspnea, physical signs of bronchitis, bilateral consolidation of small areas and indefinite duration, are all in marked contrast to the abrupt onset with chill and continued high fever, rusty sputum, panting respiration, no sign of bronchitis, unilateral involvement, definite duration, and crisis of lobar pneumonia.

If the symptoms are not sufficiently characteristic, the microscope may reveal the true nature of the disease, and especially should the microscopic examination not be neglected in those protracted cases in which there is suspicion of tuberculosis.

TREATMENT.—Catarrhal pneumonia is a non-specific disease of indefinite duration; therefore, as I have already remarked, the treatment must be symptomatic. The sick room should be kept at uniform temperature and well ventilated, the diet should be light and nutritious, but easily digested and liberal in quantity, after the subsidence of the acute symptoms.

In the matter of local measures I have never been an advocate of poultices of any kind, and have been doubtful of the value of the cotton and the oil silk jacket, though I have formally used the jacket in some cases. I think, however, that it is fortunate for our patients that the day of poultice, cotton jackets, *et id genus omne* is past, and that for the most part all such abominations have passed into desuetude. I think the application of cold clothes, or, better, an application of ice bags to the chest in the acute stage is a rational measure. A mustard plaster is frequently of much service. In children I advocate a mild mercurial purge at the beginning, then aconite or aconitine when the fever is high. Ipecac in small doses and Dover I think are the best sedatives, and I think the ammonia preparations exert a beneficial influence, and for children and aged persons I prefer the carbonate. The treatment for adults is along the same line as that for children, but in the aged I would not give calomel except when specially indicated, and am quite careful in the use of aconite. This disease, being non-specific, there is no specific treatment; but the practitioner who recognizes symptoms as they arise and applies the appropriate remedies promptly may do much for the patient in giving comfort, in cutting off many days of suffering and saving life.

Selections,

THE SERUM TREATMENT OF TYPHOID FEVER,*

BY MAX EINHORN, M.D.

Professor at the New York Post-Graduate Medical School, New York.

[From the Beth Israel Hospital, New York.]

Typhoid fever is one of the most serious and protracted of all acute infectious diseases. It is present everywhere, and demands many victims annually.

The methods of treatment now in vogue had for their object the strengthening and sparing of the organism, in order to allow it to fight out its battle with the immigrated Ebert bacilli. We were, however, unable to support it directly in this combat. We could only pave the way for nature, but not enter upon it ourselves.

Since von Behring showed that diphtheria could be cured by a specific serum, a similar treatment has been looked for in typhoid fever.

Chantemesse was probably the first to attack this problem successfully. His first experiments were undertaken in the year 1902, but were not crowned by practical results. It was only in 1899 that he succeeded in obtaining a serum, showing antitoxic and bactericidal properties for typhoid fever. At the close of his work Chantemesse says :

“ Having gained this experience, I have been able to inject a typhoid fever patient with an antitoxic serum. The value of this new line of treatment can not be judged except by the study of large statistics and numerous observations. I can, however, say that the serum acts in typhoid fever after the manner of an antitoxin, diminishing and suppressing nervous phenomena, lowering the temperature and affecting a cure.”

Chantemesse then treated one hundred cases of typhoid fever with this serum, and published the results in 1901. According to him, the serum seems to exert a specific action ; the duration of the disease is shortened and the mortality diminished. Chantemesse had a mortality of 6 per cent. with his method, whereas in other Paris hospitals it amounted to 10-20 per cent. Chantemesse advises the early use of injections even in cases in which the diagnosis of typhoid fever is not

*Medical Record, January 16, 1904.

yet quite certain. The results seem to be better the earlier the treatment is begun. Danger from the serum treatment does not exist. Chantemesse compares the treatment of typhoid fever with that of diphtheria, and says: "As in diphtheria, the serumtherapy of typhoid fever should be begun early. But the resemblance stops here. In diphtheria the serum suppresses or diminishes the intoxication and causes an expulsion of the microbes from the throat, whereas in typhoid fever the germs infesting the internal organs can not disappear until surrounded and digested by the phagocytes. We can understand that these microbes, through the action of the serum, may be destroyed more or less quickly according to the vitality of the patient, and that those of the microbes that have escaped the action of the phagocytes may multiply and cause a relapse, which hardly ever occurs in diphtheria.

Bokenham, Walker and Ewing have worked in producing an anti-typhoid serum, but do not report any clinical results from it.

Jez made an organic extract from the spleen, marrow, brain, spinal cord and thymus of rabbits, which he had immunized against typhoid fever and treated typhoid patients with it. He gives it per os and in tablespoon doses, and arrives at the following conclusions:

1. The Jez antityphoid extract is of specific therapeutic value against typhoid fever only.
2. It is a harmless preparation, which can be given even in large doses, without any untoward effects.
3. It is an aid in differential diagnosis.
4. If given uninterruptedly in typhoid fever it decreases the temperature and strengthens the pulse.
5. It shortens the duration of typhoid fever, and diminishes or neutralizes completely the effect of the toxins of typhoid fever.
6. Taken per os it naturally can not cause any such complications as sometimes result from subcutaneous injections.

Eichhorst has treated two patients with a serum made in Berne without any appreciable results, but had excellent success in twelve patients treated with Jez extract.

Du Mesnil later on treated a large number of cases of typhoid fever with a serum also made by the Berne Board of Health (Drs. Tavel and Jez) and had good results.

Whereas the authors just mentioned ascribe to the new agent a specific action against typhoid fever, Widal seems to be somewhat

skeptical. Widal closes his remarks on serotherapy as follows :

“(1) Except for the diphtheria antitoxin, no serum seems to have given the results which laboratory experience would warrant us to expect in man. (2) It seems that all the so-called antitoxic sera act not upon the microbes nor the toxin, but upon the cells of the organism, which they aid in their combat with the microbes. (3) Therefore the sera of immunized animals do not seem at present to have any certain specific action, but only a general tonic effect.”

Under these circumstances, and considering the great importance of this subject for practical medicine, I have thought it of interest to give my own experience with serotherapy in typhoid fever. This relates only to a limited number of cases, yet they seem sufficient to base a judgment upon.

I employed the anti-typhoid serum of Jez and Tavel, of the Berne Board of Health. Expecting more striking results from subcutaneous injections of the serum than from giving it by mouth, I chose the first method for its routine employment, although in a few cases I also tried it per os. I used the serum, however, in smaller doses than advocated by Jez, on account of the comparatively small quantity of serum I had at my disposal. As soon as the diagnosis of typhoid fever was made (we usually waited until Widal reaction was positive), 6 to 12 c.c. of serum were injected daily until the temperature remained under 100 degrees F.

I chose for this treatment all medium, grave and severe cases of typhoid fever which were observed in the hospital. Light cases of typhoid fever were not subjected to the serum treatment. The number of patients treated was ten. In all the diagnosis of typhoid fever was certain. Seven gave a positive Widal reaction, whereas three showed no agglutination, but gave, otherwise, all positive signs of typhoid fever (enlargement of spleen, roseola, etc). I may be permitted to put all cases treated with the serum into a table and to give three histories with temperature curves in a more detailed manner.

CASE I.—Nathan C., nineteen years old, admitted October 11, complains of chilliness, fever and weakness, headache and diarrhea. Tongue moist and coated. Lungs negative, heart action vigorous, sounds not quite clear. Liver normal. Spleen can not be palpated. Upper dullness at eighth rib. Abdomen soft, not tender. Suspicious red spots over abdomen and chest. Leucocytes, 10,000. Red cells, 4,000,000. Temperature curve showed very steep remissions immediately after beginning serum treatment and a marked crisis on the

twenty-first day of the disease, with subnormal temperature, lasting a few days.

CASE II.—Meyer W., twelve years old, admitted September 17, has been complaining for the last eight days of headache, fever and diarrhea.

Status præsens: Apathetic. Purulent discharge from both ears. Heart and lungs negative. Spleen can be palpated. Roseola on abdomen and chest. Widal positive, 1-20. Red blood cells, 5,000,000. Leucocytes, 10,000. Hæmoglobin, 85 per cent.

September 20. Condition unchanged, injection of serum.

Spleen hardly to be felt, roseola fading.

September 27. Spleen again palpable, fever higher.

October 1. Roseola reappears.

October 6. Left mastoid tender on pressure, roseola less.

October 9. Temperature normal.

CASE III.—Anna B. had typhoid fever twice this fall in the Beth Israel Hospital.

During her first illness serum was not used; during her second period of illness it was applied. The temperature curves of the first and second typhoid period in the same patient can well be compared, and thus allow us to recognize more easily the influence of the serum. We will therefore repeat this case in detail.

Anna B., sixteen years old, admitted September —, has been complaining ten days of chilliness, fever, weakness, headache, slight cough, lack of appetite and constipation.

Status præsens: Spleen one and one-half inches below margin of ribs, roseola present, no diazo-reaction. Widal positive, 1-20.

September 20, dismissed. Returned on October 10, with 104.5 degree fever. Diffuse erythema of skin, large spleen, diazo-reaction present. Widal positive, 1-20; leucocytes, 7,000.

October 26, dismissed.

In perusing this table and the histories we may draw the following conclusions with regard to the serum treatment of typhoid fever:

1. In most cases the disease does not seem to have been materially shortened.

2. Either on the day after the first or on that after the second injection a marked reduction of fever usually occurs; this is about 1 to 2 degrees lower than previous remissions and lasts longer. The general condition, especially the sensory and nervous symptoms, are much improved, so that some grave complications, such as sleepless-

headache, restlessness, delirium, disappear nearly entirely.

As may be seen from the table the serum treatment of our cases was begun rather late, usually from the ninth to the fifteenth day. We may expect the results to be still better if these injections can be practiced still earlier. Chantemesse is certainly right in recommending injections, even in cases that are only suspicious of typhoid fever, before the diagnosis is certain.

My material is too small to allow for reaching conclusions. This much, however, we can assert, that the serum treatment of typhoid fever temporarily reduces the fever and improves the general condition, so that patients go through a more rapid and safer convalescence. The injections do not seem to be connected with any dangers. With the many injections given we never had any serious trouble; in two cases a passing erythema of the skin was observed at the point of injection, and in one case chills used to follow for from one-quarter to one-half hour. Abscesses were never observed. I therefore believe that the serum treatment of typhoid fever is now already of decided value. There is no doubt that we shall soon have more potent sera, with which we may obtain more favorable results. At all events, the treatment originated by Chantemesse certainly means a lasting progress of typhoid fever.

CONTRAINDICATIONS TO MATERNAL FEEDING.

BY WILLIAM A. NORTHRIDGE, M. D.

These should be comparatively rare, for Nature's intension surely is that the mother shall suckle her young. Yet it is a matter of frequent observation that babies are weaned for insufficient cause.

It should always be considered a very serious proposition to wean an infant under eight months of age, especially in the summer time. Its life may pay the forfeit.

The mother also must pay the price if she breaks Nature's laws in this regard. She is much more prone to uterine disease, diseases of the breast, cancer, frequent child-bearing, and besides loses the pleasure of nursing her own child.

Normal maternal lactation being Nature's method, we should be very sure that this has become abnormal beyond any known remedy

before we advise or consent to the cessation of maternal feeling.

Because a baby does not thrive upon the breast is not in itself a sufficient reason for weaning. Perhaps it is fed too seldom, or for too short a time, or too frequently, or for too long a period, or the cause may be inherent in the mother, or in the milk, and may be removable. The trouble should be searched for, and, if possible, overcome. Sometimes, the cause being eradicated, nursing and nutrition go on again normally.

Because a mother is nervous, or frail, or given to fits of anger, or unhappy, or does not wish to nurse her baby—the *causes* are not necessarily good reasons for weaning. They should be made light of, from the standpoint of the physician. Let the mother take the full responsibility of weaning if she insists, unless weaning after careful effort to nurse is deemed advisable.

From my own experience and observation I am convinced that earnest efforts would result in many mothers nursing their babies where aforetime they deemed themselves incapable of doing so.

Some women, not knowing what joy they are missing, simply refuse to nurse their babies, often from some selfish motive, and "when a woman won't she won't." These unfortunate babies must be wet-nursed or brought up artificially, and some of them die.

The following are some of the reasons given for weaning, which, in the great majority of cases, do not constitute real contraindications:

Cracked nipple.

Hyperthesia of the nipple.

Ulcer of the nipple.

Caked breasts.

Mother unwilling to nurse her child.

Irregular habits on the part of the mother.

Mother ill-tempered.

Mother given to fits of depression.

The physician should be able to overcome these by treatment and persuasion. If he can not overcome the cause it becomes a real contraindication.

The following are some of the conditions which may, in certain cases, constitute good and sufficient causes for weaning. The doctor must judge in each case according to the facts, and his decision should be final as to whether the nursing shall go on or not.

Abscess of the breast.

Insufficient supply of milk.

Child losing weight or not gaining.

Indigestion in child.

Frequent emesis.

Syphilis in the mother ; child apparently free.

Diseases of the nervous system.

Chronic disease of the skin.

Menstruation.

Pregnancy.

My experience as to pregnancy and menstruation is as follows : In many cases menstruation does not interfere in the least with the nursing, in effect, either upon the mother or the child. It sometimes causes the mother to feel "dragged out" somewhat. Sometimes the milk will disagree with the child temporarily. In such a case it is wise to give the baby an artificial food during the menstrual week, and keep the breasts pumped out occasionally each day. If either mother or child appear to be gravely disturbed, of course the nursing should cease at once.

Pregnancy often, for a time, does not interfere with the nursing. The pregnant woman, if she be strong and well, often can and does nurse her baby for the first few months. If certain symptoms, to be enumerated later on, supervene, it is better to wean the baby at once. If the child is old enough to make it at all safe, it should be weaned at once, anyway, and thus relieve the mother of the double burden. The danger of reflex miscarriage should be borne in mind.

Of course we should remember the rule that pregnancy and lactation should not go on together, and always in these cases use our very best judgment.

The following reasons for weaning absolutely always hold good, and should be included in our mental list as constituting just causes for weaning. We should positively forbid the mother to attempt to nurse her child when any of these are present :

Absence of the breasts.

Insurmountable defective development of the breasts.

Mastitis in both breasts, with pus in the milk of both.

Carcinoma of the breast.

Entire and insurmountable cessation of the secretion of milk, no appreciable cause being present. It should be remembered in this connection that sometimes one breast will secrete milk while the other will not.

Total absence of the nipples (rare).

Severe cases of puerperal fever.

Prolonged cases of metrorrhagia or menorrhagia.

Serious attacks of acute disease, as typhoid or pneumonia.

Advanced cases of chronic diseases.

Tuberculosis.

Syphilis (unless child is syphilitic, when one should use best judgment.

Adynamia.

Mental disease.

Hysteria gravis.

Epilepsy (with many seizures).

Chronic arthritis.

Child steadily losing weight, notwithstanding all our efforts.

Milk persistently and greatly abnormal and not agreeing.

Certain acute symptoms appearing in the mother call for weaning for her sake. These are principally faintness, vertigo, palpitation, weakness, night sweats, languor, tremor and cough. On weaning being accomplished they quickly disappear. In my experience these symptoms come on so late in the nursing period that weaning can be done with little danger to the nursling.

A society woman should give up fashionable life after her baby is born. Some one has well said, "A votary of fashion has neither the time, energy or strength left to nurse her baby." He might have added, "or inclination."

When no imperative reason for weaning exists the physician should insist that the mother make a strong, earnest effort, under his guidance, to nurse her child.—*Brooklyn Medical Journal.*

Progress of Medical and Surgical Science,

THE EXPLANATION OF URINARY OBSTRUCTION IN HYPERTROPHY OF THE PROSTATE.

The November number of the *Annals of Surgery* contain a very timely and suggestive article by Dr. George Walker Hawley, in which the surgical problem in prostatic hypertrophy is discussed. He bases his argument upon the following postulate :

“ The hypertrophy or overgrowth of any organ, in one or all of its tissue elements, presents two morbid anatomical changes : (1) An increase in the number or size of the cells of which it is composed ; (2) displacement of contiguous structures (other organs and tissues) due to the expansion of the hypertrophied organ, for physical laws teach us that no structures, surrounded by other structures, can enlarge without displacing them. The change in the gland itself becomes of pathological significance only when increased functioning power results in functional overproduction, and in the upsetting of economic equilibrium of the physiologic system to which the organ belongs, and, under such circumstances, becomes clinically manifest by symptoms referable to the organ itself. The second morbid change, the displacement of other organs, only becomes of pathological significance when such displacement causes interference with the function of the displaced organs and becomes clinically apparent by symptoms referred to them.

“ The mechanism of interference with urinary evacuation through vesico urethral elevation in prostatic hypertrophy can be attributed to several factors : (1) To inefficient bladder drainage caused by elevation of the outlet of the urinary reservoir ; (2) to incomplete emptying of the bladder through limitation of the vesical movements. Normally, the bladder, outlet, is on a level with its floor, so that draining is perfect. Any elevation of the outlet raises the level of drainage, thereby requiring extra force to raise up and expel the urine below that level. The movements of the bladder are complicated ; first, the neck and floor of the bladder sink slightly downward and forward, still further lowering the level of exit and straightening the intrapelvic urethra. At the same time the vesical sphincter dilates, followed by contraction of the bladder wall. The overgrown and encroaching prostate prevents the sinking of the outlet and renders the bladder floor rigid, inhibiting proper vesical contraction. We would expect

from elevation of the bladder outlet, residual urine offering a favorable condition for stone formation and infection; from insufficient bladder contraction, a compensatory hypertrophy of the vesical musculature and frequent micturition due to the efforts of the bladder to wholly expel its contents; and a congestion of the vesical outlet and urethra from obstruction to the efferent circulation of these parts with a tendency to retention of urine. These results tally exactly with the signs and symptoms which we hold as characteristic of prostatic hypertrophy."

The ideas advanced by Dr. Hawley receive additional support from several anatomic facts not referred to in his article. In infancy and early life the bladder is conical in shape and enlarges, during distention, upward and forward, thus insuring the internal orifice of the urethra a position at the lowest part of the viscus. Later in life the bladder sinks lower in the pelvis, and "its long axis is directed from above obliquely downward and backward, in a line directed from some point between the os pubis and umbilicus (according to its distention) to the end of the coccyx." [Gray.] Still later in life, possibly due to atrophy of the vesiculæ seminales plus enlargement of the retro-urethral portion of the prostate, a sagging of the postero-inferior part of the bladder occurs, and thus a pouch is formed, which consists largely of the trigonum—the most rigid and inelastic portion of the bladder wall. This portion (the trigone), because of its intimate adhesion to the subjacent tissues, can not adapt itself to enlargement in front of it, hence residual urine begins to accumulate and forms a retro-prostatic pouch. The amount of residual urine will increase because the hydrostatic pressure will tend to enlarge the pouch in all directions; the quantity of residual urine will correspond precisely to the amount required to fill the pouch up to the upper level of the prostate. In other words, the residual urine will be that portion of the secretion which lies below and behind the orifice of exit from the bladder.

The practical point to be gleaned from Dr. Hawley's paper is that any measure for the relief of the symptoms found in cases with hypertrophy of the prostate must, to be completely successful, restore the vesical orifice of the urethra to a position in which it can drain the bladder completely.

The technique is as follows: "In each case Zuckerkaudl's bischial perineal incision was made, exposing the bulb of the urethra and the posterior half of the perineum. The part of the latter was released by dividing the recto-urethral muscle just behind the attachment of

the bulb. This served another purpose besides weakening perineal support, namely, enlarging the operative field by allowing the rectum to drop backward. The levatores were then divided, still more enlarging the operative field and facilitating exposure, and the prostatic sheath opened along the under surface of the prostate from apex to base. The sheath on each side was separated from the lateral and under surface of the retro-urethral prostate by the finger (as in prostatectomy). After freeing the sheath, the prostate was dislocated downward, very readily in one case but only slightly in the others, because of considerable size of the lateral lobes. In each case the reduction of the elevated neck of the bladder was very plain, but insufficient. In each case sections were removed from the outer and lower portion of each lateral lobe. This resulted in still greater reduction, and in one case, where the enlargement was almost entirely of the middle lobe, with marked upward projection of the bladder floor, the latter disappeared entirely. In each case the reduction seemed complete; the retroprostatic pouch was obliterated and good bladder drainage restored, except in one subject, where the pouch was large and trabeculated. In each case the urethra and bladder and ejaculatory ducts were uninjured, and enough of the prostate remained untouched to perform its functional purposes, in all probability."

Any advantage that may appertain to the operation described above is found in the last sentence of the preceding paragraph. It remains to be seen whether these advantages are sufficient to justify the performance of an operation which is, from a surgical standpoint, manifestly incomplete.—*Cincinnati Lancet-Clinic*.

COMMON DUCT STONE WITHOUT CHARACTERISTIC SYMPTOMS.

BY GEORGE EMERSON BREWER, M.D.

The following case is reported as an example of a practically symptomless stone in the common duct; certainly an exceedingly rare condition, and contrasting strongly with those cases of common duct stone, accompanied by septic cholangitis.

C. S., female, aged twenty-two years, was admitted to Roosevelt Hospital during the summer of 1903. For the past four years the patient has complained of occasional attacks of rather indefinite

abdominal pain, some of which were accompanied by slight jaundice. Four months ago she had an attack which was somewhat more severe than the others, and was accompanied by well marked jaundice, but without fever. The attack lasted three or four days and then gradually subsided. Since that time she has had more or less discomfort in the upper right quadrant of the abdomen, but no acute pain. The patient has been able to work without interruption, is apparently well nourished, and has shown no sign of jaundice since the last attack.

On examination, the patient presents a clear, healthy skin. The abdominal examination was absolutely negative with the exception of slight tenderness, on deep pressure, over the region of the gall bladder. Heart, lungs, liver and spleen, normal; examination of the urine, negative. No leucocytosis. The diagnosis of cholelithiasis was made, and an exploratory operation advised.

Under ether anesthesia an incision was made along the outer border of the right rectus muscle. The gall bladder was found to be normal and free from calculi, as was the cystic duct. Palpation along the free border of the gastrohepatic omentum revealed the presence of a hard, movable body in the common duct. This was easily brought to the surface of the wound by the finger placed within the foramen of Winslow. The duct was cleared, and a short, longitudinal incision made, through which a single round calculus was removed. A probe introduced into the common duct passed easily into the duodenum. The wound in the common duct was closed by the Mayo method, a small strip of gauze tape being left leading to the duct wound. The abdominal wound was partly sutured and dressings applied. The drain was allowed to remain in place twelve days, after which the wound promptly closed. She made an interrupted recovery.—*Medical Record*.

NEW YORK.

THE DIFFERENTIAL DIAGNOSIS OF SYPHILIS AND CANCER OF THE VULVA,

Dr. Barton Cooke Hirst, Philadelphia, reported the case of a woman twenty-eight years of age, single, who had never been pregnant. She denied ever having led an immoral life, and the possibility of venereal infection. Ten years ago she was operated on in the Pennsylvania

Hospital for hemorrhoids and fissure in ano. The wound of the operation did not heal properly. More than a year ago the patient noticed an ulcerated condition of the vulva, and a short time afterward incontinence of feces, followed soon by incontinence of urine. For two years past there had been amenorrhea. On a specular and digital examination, a fistula between the navicularis and the rectum was discovered. The whole urethra was gone; there were three little tubercles at the neck of the bladder, these being all that was left of it. The vagina above the neck of the bladder was perfectly healthy. The cervix was normal except that it was atrophic, as was the whole uterus. The case, at first sight, looked like an inoperable epithelioma of the vulva, and was pronounced to be so by one of the most experienced dermatologists in Philadelphia. But there was none of that extensive infiltration and elevation of the skin surface around the edges of the ulceration, such as was seen in an example of extensive epithelioma of the vulva, considerably advanced, but not yet inoperable. Moreover, numerous pieces of tissue from different places in the ulcerated area showed nothing characteristic of cancer. There was everywhere the most extensive round cell infiltration and necrosis of tissue. The microscopic study, as well as the macroscopic appearance, suggested syphilis in the ulcerated gummatous form. Accordingly the patient was put on specific treatment in spite of her negative history. The treatment was given up within a week, as the patient was severely pyralized.

Lupus next suggested itself. On two separate occasions, under anesthesia, twelve or fifteen pieces of diseased tissue were removed for microscopic examination. No tubercles or bacilli could be discovered anywhere. Inoculations in animals were negative. The urine contained no tubercle bacilli. The bladder itself was healthy. There was a response to the tuberculin test, but the woman had a patch of consolidation in the apex of one lung. Meanwhile the patient was given X-ray treatments every other day for eight to ten minutes. Within three weeks the external ulceration was healed. Two weeks later the rectovaginal fistula spontaneously closed under the continuance of the X-ray applications. Nothing remained of the original disease except the absence of the urethra and an elephantiasis condition of the labia majora. The former had been corrected by urethroplasty. He had not yet joined the new urethra to the opening in the bladder, so that the establishment of continence of urine was still doubtful, but he was quite hopeful of making the patient eventually entirely comfortable.—*Four. Amer. Asso.*

"THE DIFFERENTIAL DIAGNOSIS OF TYPHOID FEVER IN ITS EARLIER STAGES."

[*Rucker, American Journal of Medical Sciences, Vol. 127, No. 7, pp. 501-504*]

The face in typhoid early presents flushed cheeks, clear sclera, and alert but not anxious countenance, in striking contrast to the grayish color of the face, sub-icteric sclera and the anxious, restless expression of remittent.

Enlargement of the spleen, while seen in most all the infectious diseases, is especially diagnostic in typhoid by its early appearance, being found as early as the middle of the first week.

In typhoid the late appearance of the eruption stands out in striking contrast to the early appearance of it in all the other exanthematous diseases, the eruption being located on the back, breast and abdomen, and being slightly elevated above the surface, and the blood contained in the rose spots containing the bacillus typhosus, the blood also showing a diminution in both the white and red corpuscles and a corresponding decrease in the per cent. of hæmoglobin.

The pulse, while exhibiting a striking parallelism to the temperature curve, is relatively infrequent, and does not attain that degree of rapidity which we are accustomed to find in like degrees of fever, and by the fourth or fifth day they are dicrotic, and usually remain so throughout the attack, but may, however, be only of the ephemeral variety. Dicrotism occurs more often in typhoid fever than all the other infectious fevers combined. Again, we find that wide daily fluctuations of temperature will occur even though the patient has no fever, and, of course, we all look for the gradual increase of fever from one day to another, which, when found, makes our diagnosis, but unfortunately does not always show itself early.

The Ehrlich diazo test of the urine will appear anywhere from the fifth day on, and if we can eliminate the acute exanthematous diseases, such as measles, scarlet fever, etc., and advanced malignant disease we have a fair assurance that we are dealing with a case of typhoid.

INTOLERANCE OF MILK DIET.

The following suggestions are given in the *Journal des Praticiens* of December 20, 1902, by Dr. Robin. After pointing out the fact that certain patients do not seem to be able to take milk and digest it,

and yet in many of these instances it is the diet which is actually needed, he goes on to a consideration of the means by which we may aid its digestibility. The disagreeable effects which sometimes ensue in patients who are put upon this diet are pain, tympanites, constipation, or diarrhea. The pain can be avoided, he thinks, by the use of the following formula :

℞ Bicarbonate of soda,
Calcined magnesia, aa 1 drachm;
Prepared chalk, 1½ drachms.

Mix and make into ten packages.

One of these may be taken after each drink of milk, and if it is thought wise, 6 or 8 grains of pepsin may be added to each powder. In other instances one or two pills of pancreatin may be employed.

For the relief of the gas he recommends the employment of

℞ Fluoride of ammonium, 3 grains;
Distilled water, 10 ounces.

A teaspoonful after each dose of milk.

For the constipation we may resort to rectal injections, or give a pill of aloes, belladonna and strychnine; while for diarrhea, if it occurs, one of the vegetable astringents may be given, or the subnitrate of bismuth may be administered.—*Therapeutic Gazette*, May.

A METHOD OF TREATING ACUTE INFECTIOUS DISEASES.

Wernitz, of Odessa, reports a method of treating acute infectious diseases by the administration of salt solution per rectum. After the lower bowel has been washed out, one liter of a 1 per cent. salt solution is introduced very slowly, a little at a time. About one hour is generally taken for its administration. The process is repeated every one or two hours, according to the severity of the case. In a case of acute septic infection ten liters was thus given in twenty-four hours. At first absorption is very slow, but it gradually becomes more rapid. The pulse becomes fuller, the dry mucous membranes become moist, the patient is quieter, and headache and delirium disappear. Soon a free secretion of urine occurs, the skin becomes moist, and after the administration of the second or third liter a profuse sweat intervenes, accompanied by a fall of temperature. If the injections be discontinued the temperature rises again. Slight rises of temperature occur also in

the intervals between administration of the injections, but they are progressively less and less.

Wernitz claims that this method possesses decided advantages over intravenous transfusion, inasmuch as it does not overwhelm the weakened and exhausted heart with large quantities of fluid, but gives to the organism only as much fluid as it can bear. He has not noticed that when the heart is very weak only a little fluid is absorbed at first, but that absorption becomes more and more rapid as the heart and circulation improve. Good results have been obtained in all cases in which the method has been employed.—*Therapeutische Monatshefte*, January, 1903; *Therapeutic Gazette*, May.

FIVE HUNDRED CASES OF CHLOROFORM ANESTHESIA IN GYNECOLOGICAL PRACTICE.

Evelt, of Munich, reports five hundred cases of chloroform anesthesia without any deaths. The patients are given no food after the evening of the day preceding the operation, the bowels are emptied with castor oil, and 0.01 of morphine hydrochlorate is given hypodermically one-half hour before the operation. The technique of administration is as follows: A Schimmelbusch mask is held a hand's breadth above the face, and chloroform is allowed to drop upon it at the rate of twenty drops a minute. After two or three minutes it is placed upon the face, and the chloroform is continued at the rate of twenty drops a minute until the pupils contract and fail to react to light. Then the drug is suspended, but the mask is left upon the face, enough chloroform being inhaled from it to keep the patient under for some time. As soon as the pupils begin to dilate, enough chloroform is given to cause them to contract again, and this procedure is kept up throughout the operation. Evelt places no reliance upon the corneal reflex. He thinks retching is best controlled by careful continued administration of the anesthetic. He uses the hooked tongue forceps in all cases. If the after effects of the anesthesia are mild, and there is but little or no nausea, he allows the patient iced tea, lemonade, or wine and water on the day of operation, light food on the first day, and full diet on the second day after. This rule does not apply to persons who have undergone intestinal operations.—*Munchener Medicinische Wochenschrift*, December 2, 1903.—*Therapeutic Gazette*, May.

THE ACID TREATMENT OF PRURITUS.

Leo, in the *Therapeutische Monatshefte* for November, 1902, reports the case of a man, aged twenty-five years, who had suffered a year with an excruciating general pruritus, the cause of which could not be elicited by careful examination, the patient being strong and well nourished. His urine was strongly alkaline and contained an excess of earthy phosphates. Leo thought that the alkalinity of the urine might represent an increased alkalinity of the blood upon which the pruritus might depend, so he placed the patient upon hydrochloric acid, which soon reduced the turbidity of the urine, but did not cause a change in reaction, although the pruritus was somewhat lessened. Then sulphuric acid was administered in ascending doses until the urine became acid. The pruritus decreased constantly, and disappeared entirely upon the eighth day. Leo has obtained good results by the use of sulphuric acid in three cases of pruritus in which the urine was not alkaline. He attributed the benefit to lessened alkalinity of the blood produced by the acid, which he deems worthy of trust in all obscure cases.—*Therapeutic Gazette*, May.

ALBUMEN AND CASTS ALONE NOT A CONTRAINDICATION TO ADMINISTRATION OF ETHER.

For years we have been taught that if a patient was suffering from a nephritis, that ether was contraindicated as a safe anesthetic, and some even believe that the excretion of ether through the kidney epithelium was a sufficient irritant to produce a nephritis in a healthy kidney.

Dr. J. C. Monroe throws some light on the subject when he reported 500 cases operated on who had albumen, hyaline and granular casts in their urine. Of the 437 of these patients who recovered there was no complication that could be attributed to the kidney lesion. Of the 63 cases that died, with two exceptions the conditions found at post-mortem examinations did not give any weight to the urinary conditions as a cause of the fatal results. The *Journal of the American Medical Association* quotes Dr. Monroe as stating that we should expect evidence of renal irritation in over one-third of the surgical patients in a

municipal hospital.

A trace of albumen, with or without hyaline and granular casts, unattended by any other evidence of renal damage, should not influence the prognosis in surgical diseases or operation, but that the presence of albumen and casts should lead us to watch for other signs of organic degeneration which might unfavorably influence operations or recovery. And he does not consider albumen and casts alone a contraindication to the administration of ether.

SYPHILIS THE MOST IMPORTANT FACTOR IN AORTIC ANEURISM.

Clinical statistical investigation discloses with certainty that in an exceedingly large proportion of aortic aneurism a history of syphilis can be obtained.

Pathologic-anatomic investigation shows that the changes found in aortic aneurism are similar to those found in syphilitic degeneration of the arterial walls. We are beginning to regard aortic aneurism as a sequellæ of syphilis to almost the same degree that we do post spinal sclerosis (tabes dorsalis).

RESUSCITATION OF ANIMALS APPARENTLY DEAD.

The *Journal of the American Medical Association* quotes Dr. Geo. W. Crile, of Cleveland, Ohio, as having restored to life animals dead fifteen minutes by the infusion of indrenalin solution in their veins.

CARDIAC PULSATIONS RE-ESTABLISHED AFTER DEATH

Kuliako (*La Semaine-Medicale*, No. 2, 1903) states that he has been able to re-establish pulsations in the heart of a child three months old, dead of double pneumonia. The heart was removed twenty hours after death, and was submitted to an artificial circulation with Locke solution; this is a saline solution containing the minor elements of

blood, together with a quantity of dextrose. It was employed hot, and saturated with oxygen. After twenty minutes feeble rhythmical contractures were observed, at first in the muscular substance, then in the right ventricle. Finally the heart began beating regularly, and this persisted for one hour. The author has repeated this upon other human hearts thirty hours after death, and has succeeded in causing pulsations in spite of the formation of large clots in the heart.

IMPORTANCE OF LEUCOCYTE COUNT IN INTESTINAL OBSTUCTION.

Bloodgood (*Annals of Surgery*, December, 1903), reports a case of post-operative intestinal obstruction presenting unusual symptoms, and where a second operation was performed, owing to a rapid rise in the leucocyte count.

After laparotomies, where nausea and vomiting, obstipation and abdominal distention occur after the third day, prompt operation will save life, and the most accurate early sign is the leucocyte count. Cases observed where the count varied from 15,000 to 30,000 an operation has revealed an obstruction that would have proven fatal had the treatment been delayed.—*Cincinnati Lancet-Clinic*.

A CONVENIENT METHOD OF ADMINISTERING QUININE SUBCUTANEOUSLY.

Aufrecht (*Therapeutische Monatshefte*, February, 1903) recommends the following preparation of quinine for subcutaneous injection :

- ℞ Quininæ hydrochloratis, 0.5;
Urethani, 0.25;
Aquæ destillatæ, 5.0.

Urethane increases the solubility of quinine, and hence it does away with the necessity of injecting large quantities of fluid into the tissues. Aufrecht obtained as good results from the use of the above solution as with a simple solution of quinine in 34 parts of distilled water.—*Therapeutic Gazette*, July.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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Editorial.

ADIEU.

In severing our connection as editors of the PRACTITIONER AND NEWS, it becomes our pleasant duty to endorse its newly elected editors as progressive men, who will leave no stone unturned to make its columns teem with interesting matter in the domain of medicine and surgery. They will maintain its former *high standard* of ethics—will fight for the *highest standards of medical education*, and a union of the medical body politic, wherein the greatest strength of the profession for its advancement lies. In conclusion we ask the good wishes and support of the past, and we sincerely hope that their efforts will be crowned with the success that is deserved by those who honestly take up the labor in this arduous field.

EDITORIAL NOTES.

X-RAY PRIZE ESSAYS.—Believing that the further development of X-rays is of great importance to surgery and medicine and the human race, and to encourage research and disseminate the knowledge gained the *Illustrated Review of Physiologic Therapeutics* offers the sum of fifteen hundred dollars in cash prizes for the best essays on X-rays in

medicine and surgery, the first prize being \$1,000. All surgeons, physicians and hospitals, interested in any branch of X-ray work, should write to the *Illustrated Review of Physiologic Therapeutics*, 19 East Sixteenth street, New York City, for information concerning title, time allowed, conditions, etc.

For your information we may say that we give this prize on about the same plan as the recent "Preventive Medicine" Prizes.

THE ACUTE POISONING CHART, gotten out by Victor Koechl & Co., is one of the most serviceable ever before the profession, for it is concise, easily referable and thoroughly reliable. Every practitioner should avail himself of one, as it can stand him in good stead at the time he least expects.

THE RELATION OF THE SURFACE AREA OF INFANTS TO THEIR NUTRITIVE NEEDS.

Lissauer carefully measured twelve infants, studied the relation between the nourishment taken and the surface area in others, and thoroughly reviewed the literature. He comes to the following conclusions:

1. The estimation of the nutritive need according to the weight gives reliable average figures only in infants developed in accordance with their age.
2. The surface area of infants of the same weight is the same, independent of their age.
3. The nutritive need of infants of the same age but of different weights is different. It is not proportional to the weight, but to the surface area.
4. The nutritive need of infants of different ages, but of the same weight is different even if the surface area is the same. The older infants who are backward in their nutrition have a much greater need. This need corresponds to that of the normal infants of the same age.
5. The greater need of the backward older infants in comparison to the younger infants of the same weight is due to the relatively greater number of active cells, the fat tissue not having been formed on account of the backwardness of the nutrition.
6. The differences in the nutritive need observed in infants of the same age and weight may perhaps be explained in the same way.—*Boston Medical and Surgical Journal.*

Book Reviews,

DUNGLISON'S MEDICAL DICTIONARY.—A review of this well known work seems hardly to be required; few, if any, doctors or students are unacquainted with the work, and its popularity is evidenced by this, the twenty-third edition, being called for. The workmanship on the outside shows it to be the best that can be procured by the publishers, while the inside has been thoroughly gone over, many words that have become obsolete have been dropped and newer ones substituted. The dose table has been left out, but the doses expressed in Troy and Metric system has been inserted, the derivation of the word, when from the Latin or Greek, is indicated, and throughout the works shows a careful and scholarly revisions and is to-day the standard work of its kind.

ROGER ON INFECTIOUS DISEASES.—In the translation of Professor Rogers' great work Dr. Gabriel has given to the profession a work that every one should be proud of. The work stands in a field to itself, taking up the etiology, diagnosis and treatment of that class of diseases which above all others interest us most. It has certainly accomplished the desires of the author, viz.: to harmonize any seeming antagonism between experimental research and clinical observation, and to reduce the theories of infection and immunity to the basis of practical utility. The book should be in the hands of every practitioner, and to the teacher of medicine and surgery it is indispensable.

PRACTICE OF MEDICINE BY FRENCH.—In this work the author has divided the book into three divisions. The first one, being "Principles of Medicine," deals with pathological process constantly occurring in the study of disease. Part II—Practical Medicine. In this the author is to be congratulated on the arrangement of his subjects, putting each subject under a special heading, making the work read free, and by this method he has made it a ready reference book for both the practitioner and student. Part III takes up clinical diagnosis, and the text shows the work of a scholarly and painstaking author.

THE MEDICAL RECORD VISITING LIST, received from Wm. Wood & Co., is well arranged for the busy practitioner to keep his accounts so that they can be referred to in the least possible time. It makes book-keeping easy, and the book itself shows the highest type of the bookmaker's art.

Society Proceedings.

MULDRAUGH HILL MEDICAL SOCIETY,

The regular meeting of the Muldraugh Hill Medical Society was held at Elizabethtown, on December 10th, and the following programme was rendered :

"Acute Croupous Pneumonia," Dr. T. Hunt Stucky, Louisville, Ky. Discussion opened by Dr. C. Z. Aud, Cecilian, Ky., and A. J. Slaten, Leitchfield, Ky.

"Bronchial Pneumonia," Dr. J. L. Atkinson, Campbellsville, Ky. Discussion opened by Dr. L. L. Cole, of Millerstown, Ky., and J. C. Jones, of Buffalo.

"Chronic Interstitial Pneumonia," Dr. Ed. Smith, Hodgenville. Discussion opened by Dr. Basil Taylor, Greensburg, and Dr. W. F. Boggess, Louisville.

"Surgery of the Chest, with Special Reference to Pneumonia," Dr. August Schachner, Louisville. Discussion opened by Dr. A. T. McCormack, Bowling Green, and Dr. R. C. McChord, Lebanon.

The papers were brief and pointed, and brought out a good discussion, and the Society enjoyed one of the best meetings it has had since its existence. In the report of cases during the morning session, Dr. Ed. Smith, of Hodgenville, exhibited a case of squamous eczema, and Drs. Aud, McChord and Gardner were appointed as a committee to examine the case, and Dr. Aud, in the report of the committee, said they fully concurred in the diagnosis, and suggested an alterative line of treatment, with sending the patient to Hot Springs.

Dr. McChord—I do not think that it is necessary to send this patient to Hot Springs, and that if the doctor will put him on both a local and a general treatment he will get well.

Dr. Atkinson—I wish only to add to Dr. McChord's line of treatment by the use of tar ointment, and believe that the case will get well.

Dr. O'Connor—I think that in addition to the constructive treatment already alluded to that the use of sulpho-calcine in 50 per cent. solution would give rapid relief.

Dr. Ligon reported a case of a woman that fell and went on for days, only having pain when attempting to rise or sit down. She showed no mark of injury that he could see, but finally in the left ischiatic region a dark spot became visible, and to this he applied

poultices and the usual ointments when after several hours he made an incision over this and found plenty of pus of very bad odor, which was bloody at first, but soon got thick. He treated it by washing out with mild antiseptic solutions packed with gauze, and put the woman on iron, wine and plenty of good substantial food.

Dr. Aud said, in the discussion of this case, that the doctor should watch the case close, and see that no further trouble showed itself, such as fistula.

Dr. Atkinson reported a case of a woman who was suffering with an enlargement of the thyroid gland; pulse 140, respiration 28, temperature 99.5, muscles weak, no exophthalmus, and wanted to know if the X-ray would do the case any good.

Dr. Ed. Smith, in discussing the case for the doctor, said he thought the X-ray would do no good.

Dr. McChord reported a case of fracture of the skull on left side produced by a blow from a stick about two inches square. Patient had remained unconscious from time the injury was sustained up to the time that he was seen, which was about twelve hours. He immediately operated on the man, and found that the middle meningeal artery was ruptured; the blood clot was turned out and wound dressed. The operation was done without an anesthesia, and the patient lived only a few hours. He thought that had the patient been operated on earlier he might have stood some chance to get well.

He also reported a case of strangulated hernia seen by him in consultation, which had been treated for several hours for what was supposed to be an irritable condition of a hydrocele. He advised an immediate operation, which was consented to, and when the abdomen was opened, four inches of the bowel was found to be necrosed and was resected and Murphy Button was used; the bowel was returned, and no attempt made at radical cure. With exception of slight supuration at angle of skin wound the patient at this time was doing well, this being the fifth day after the operation.

Dr. Schachner, in the discussion of the second case, said that as a rule he thought the use of the Murphy Button a bad one, for you had to depend on a machine to do something for you, that the needle and thread was nearly as rapid a method of closing as the button, and left nothing behind to give trouble.

In closing the discussion in the symposium on pneumonia, Dr. Atkinson said that lagrippe was often a factor in the mortality of pneumonia and that he had poor success in treating pneumonia when

lagrippe was prevalent ; also believed that pneumonia might be aborted in some instances if seen early. He said that he had drawn as much as nine pints of serum from one case of pleuritic effusion.

Dr. Smith closed by reviewing the different methods of treatment that had prevailed during the last few generations, and spoke of the high per cent. of mortality even at this late day, and said that bleeding, if done early, might sometimes be of great benefit, and favored a full dose of calomel at the beginning of the disease, and that he depended on ammonia, strychnine and alcohol for support, and did not advocate ice bags in pneumonia, especially in cases of low vitality.

Never aspirate in empyema, but make a free incision, with good drainage, and that it was often necessary to resect four or five ribs.

Dr. Schachner spoke of how doctors advocated bleeding, but would not do it ; and as to empyema though doctors often made mistakes by not opening early enough and free enough ; that there was great danger of reaccumulation when aspiration was done, but would not advise resection of ribs in young subject ; thought ergot in drachm doses every four hours did good, but did not think that a true pneumococcus infection could be aborted.

LOUISVILLE, KY.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts to report more than any thing else. — RUSKIN.

Original Articles.

THE MANAGEMENT OF THE INSANE AND HOW TO MINIMIZE CASUALTIES.

BY DR. T. P. SATTERWHITE.

It is the universal opinion of all neurologists and asylum men over the civilized world that diversion, in its various forms, is an absolute necessity as a therapatic agent, and can be classed in importance next to food and water for those bereft of reason.

An asylum for the insane, it is claimed, is a hospital for those who need a place of residence and guardianship. Human life may be imperiled by an attempt at care by relatives. Of all persons, as a rule, relatives are least fitted to take charge of the insane. Removal from home and family surroundings is, for the vast majority of patients, an indispensable prerequisite to recovery. Mental deterioration and helplessness are conditions which call for extraordinary means for the care of the insane, such as are not required in institutions for the ordinary sick and injured. The evolution in asylum management in recent years has been far reaching, and comparatively few people, in or out of the medical profession, realize it. In nothing else has the century just closed shown such mighty strides, and it is with commendable pride that Americans can claim that here the insane were first elevated from the position of victims of diabolic possessions to the dignity of sufferers from disease. To Virginia belongs the first hospital for the insane, in 1773. It was twenty years after the establishment of this hospital that Phillip Penal became physician to the insane at Beatrice.

and striking off their chains placed them under hospital care ; twenty-three years later William Tuke opened the York Retreat, and in France, as late as 1834, the insane were incarcerated in cages. Upon the foundation laid by Penal, Tuke, Esquival and Galt, the hospitals for the insane of to-day have been built.

I am proud to state that Kentucky stands in the front ranks in her charitable institutions, and physicians and laymen can well feel proud of her record. And as the gloom of ignorance surrounding the nature of insanity has been gradually dissipated by the light of accumulating knowledge, more rational methods of treatment have found their way in practice. Insanity is no longer looked upon as a visitation from which there is no escape and for which there is no preventive or remedy. It is this modern scientific view that is responsible for the improvements in the treatment of the insane. No longer is it deemed necessary to incarcerate such a patient, and condemn him to a life of hopelessness, isolation and inactivity. Far more is to be gained, as experience teaches, by placing them amid surroundings with only few restraints, to encourage them in such exercise and engage in such pursuits as are likely to contribute most to their well being and increase their usefulness. Exercise keeps the mind occupied, which is a very important point ; it stimulates the circulation and gives a healthy tone to the whole system ; it breaks the monotony of household life to arouse interest in some work. Nature has arranged that if we sleep and exercise sufficiently and eat wisely, there is little danger of harm from any amount of physical labor. Mental work is different. This is associated with heavy responsibilities and attended with care, suspense and anxiety, which is a great strain on the nervous system. The wage earning population who struggle for the subsistence of their families, when overtaken by the results of disregarded hygienic and sanitary laws, are unable at a critical period to obtain a change. There is no place for them except an institution of this kind, they being unable to avail themselves of private sanitariums, and our institutions are filled, with few exceptions, by that worthy class who are unable to pay the whole, or even any part, of the cost of their support. The statistics of recovery under asylum treatment, after various durations of the disease, are of great interest, and are as follows : Of new admissions, 75 per cent. recover within three months of the onset, 50 per cent. within six months, 25 per cent. within one year, and 10 per cent. after one year's duration. These figures are based on reports of asylums

throughout the world, carefully collected, and prepared by men thoroughly versed in such matters.

The commissioners and asylum officers at the Kentucky Central Asylum, realizing the necessity of doing something more for the patients under their care than sheltering, feeding, clothing, and giving medical and surgical aid when needed, have erected this building, and named it the Industrial and Amusement Hall, which name conveys to every one the use for which it is intended. Physical and mental exercise are regarded by all neurologists and asylum men as essential for the care and betterment of the insane.

In all our asylums in the State there is a perfect Niagara of mental and physical force going to waste, and how to utilize this force from a psychological and therapeutic standpoint, to say nothing of the economic one, is the great and burning question which confronts asylum men to-day.

1. How shall we direct the force to rekindle or control disordered brain function? How shall we utilize this force in contributing to the self-support of institutions? The mind may be reached from many points and along numerous channels, but the objective point must ever be the same and always in view. They must be trained in ways of life and habits of thought. They should be given occupation, and instead of freedom from care gradually increasing responsibility. Instead of drugs, personal influence and support. The development of self-discipline and self-control should be the constant aim. What are the means that experience and science recommend to this end? They are employment of various kinds, recreation and amusement. All these conduce to lessen irritation and promote mental restoration. A room where periodicals and books can be had, a hall for religious services, and various kinds of amusements. Physical culture in its various modes, music and dancing. All these are of paramount importance to divert the patient's mind from himself. The establishment of a system of industrial employment among the insane is an enterprise which is fraught with difficulties. All asylum men realize the benefit to patients, but it is not easy in arranging employment for persons with disordered minds. It must be so arranged as not to be injurious to the patient, but a benefit. Again, there may be difficulty in furnishing suitable inducements to patients to secure their acquiescence in employment. The insane, in addition to the average amount of laziness which is common to us all, are still rendered inactive by disease, and, besides this, those who are the most intelligent and skillful,

and would be the most useful if they could be employed, are the very ones who are disinclined to exert themselves for the benefit of others. They feel they are under no obligation to the institution which compels them to remain under its confinement without any reason which they can appreciate. The board, recognizing these and other embarrassments, are not deterred in doing what other institutions are adopting, and what is recognized in this age as part of the medical treatment of the insane. The motto in all the wards should be that every one should do something, and that no one should do too much. Of course there are some who can not be employed in any way. This can only be done by careful study of the individual cases, and the greatest judgment should be used. Some patients require absolute rest and liberal feeding; others the reverse. The known debasing, enervating and immoral tendencies of idleness of body and mind in every day life calls for judicious employment and diversion. This will improve the nutrition and strength of both mental and physical powers, and all institutions which furnish these can refer to a list of patients who have recovered or sufficiently recovered that they could maintain themselves, and many of them were regarded as chronic and incurable patients. If these things be true, can we by confinement reasonably expect the restoration of a mind that is diseased to be restrained by being shut up in their respective wards. There is no reason why we should not keep abreast with other institutions in so essential a work, some of whom make the employment of the inmates a source of revenue, and as a confirmation of what I have said, I will read you a few letters and extracts from journals.

The first letter I will read is from a very distinguished doctor of the Johns-Hopkins Hospital, Henry M. Hurd. Your letter of the 3d is received. I have not been unmindful of my promise to write to you. I desire to say that in my judgment there can be no more important remedial agency in the care and treatment of the insane than well directed employment suited to the capacity, taste and physical condition of every patient. An experience of many years with the the insane has shown me that no single agency does so much good to improve the morals of an institution for the insane or to add to the comfort of patients. I have visited many of the institutions of England and Scotland, and there for the first time learned what could be accomplished by well directed means of employment. Upon my return I made a report to the Board of Trustees of the Eastern Michigan Asylum in reference to the matter, and through their influence authority

was granted by the Legislature to prescribe employment for the patients equally with any other remedial agency.

The result of such legislation was to turn all the institutions for the insane in the State of Michigan into hives of industry. Farm cottages were erected, and farm colonies established in connection with most of them, and many industries were inaugurated. The immediate effect of these industrial measures was to do away with restraint with airing courts, and with the formal, jail-like surroundings of the institution. It was found by experience that non-restraint and employment went hand in hand. Non-restraint without employment was a failure. Employment without non-restraint was impossible, but the two reforms combined transformed the whole atmosphere of the institutions for the insane. Under well devised methods of out door employment dangerous and violent patients became quiet, industrious and useful. Under methods of employment, destructive and dangerous women were transformed into quiet, peaceful and helpful members of the asylum. I would consequently urge that in Kentucky an effort be made to find employment suited to the taste and mental and physical capacity of every patient. I am strongly of the opinion that if a concerted effort should be made to develop industrial pursuits in connection with the asylums in Kentucky, a marked improvement would be made in the moral tone of the institutions, a definite savings in the cost of their maintenance, and a decided increase in the recovery list. In the thirteen or fourteen asylums that were visited by Dr. Hurd, over 70 per cent. of the inmates were employed, notably the one near Glasgow; out of a population of 486, 409 were employed. These are some of the diversified employments that were carried on: Laundrying, tailoring, shoemaking, carpentering, upholstering, mattress making, basket making and kitchen work, working in boiler house, and dairy, sewing and housework, preparing vegetables, and various kinds of agricultural work. Therefore, if employment is a remedial measure, both dependent and private patients should be induced to work at some systematic labor under the safeguards of medical supervision than to allow the purposeless and perverted activity of insanity. Dr. Clouston, of the Royal Edinburgh Asylum, says one of the very worst patients who for years have been regarded as dangerous men are now the most useful workers we have.

If a certain amount of labor is not harmful to them, and if compulsion or hardship is not made a means of securing it, the expense of all institutions may be greatly lessened by the industrial pursuits of

the inmates. Then, too, nothing can be more certain than the fact that idleness is destructive of both mental and physical health. Nothing is more cruel and pathogenic than the sickening do-nothingness of the patients in many of our asylums and sanitariums. There is scarcely any class of patients except those bedridden with acute disease for whom some kind of occupation could not be found, and who would not be bettered by the activity and interest. The testimony of superintendents who have tried the plan is unanimous that in the treatment of epileptics and the insane, labor is a positive therapeutic value, and to crowd such people in buildings and compel them to live in idleness is precisely the best method of increasing disease. A distinguished journalist, writing on labor as a therapeutic agent, says this feature in asylum management is not a new idea, but there can be no doubt that its value is insufficiently appreciated, some sort of employment should be made obligatory upon all able-bodied patients, dependent as well as private patients. This should not be compulsory, as in a penal institution, nor should the idle person be coerced by physical penalties. It should, however, be the policy of the asylums to give favor to those who work and greater privileges, to pay trifling wages to those who regard such an inducement, and are competent workmen. The details of the above scheme require much work from the superintendent and attendants in getting the patient's consent. Dr. Dewey, who is recognized as one of the foremost neurologists in this country or Europe, and from whom I first got my idea of employment of the insane, says in 1885 an appropriation was asked from the Legislature of Illinois to build a workshop at Kankakee. In this building we began in a moderate way, looking over our patients to see their previous occupations and handicraft, and those who had never been engaged in any employment were given simple forms of work. The percentage of employment rose rapidly to 75 per cent., 73 per cent. of the total number of patients were usefully employed on an average, that is to say 73 out of every 100 perform every day as much as two hours of labor. There are many who do work eight hours. A few we pay small amounts to, some who receive at Christmas and New Year's presents. Other inducements, such as parole. Tobacco was a great inducement.

Dr. Dewey, in closing, related what he saw in Dr. Brigg's Hospital at Tuscaloosa, Ala., that about 90 per cent. of female patients were employed. The attendants had the patients gathered about them, sewing and knitting. Idleness seemed to be exceptional. In one large

room there were 50 or 60 engaged in carding and spinning cotton. They were happy and cheerful. In the short while since the inauguration of employment and amusement, there were 25 chronic and so-called incurable cases that were sufficiently recovered to return to the outside world and maintain themselves.

Dr. S. C. Clark, of the Springfield Hospital for the Insane, says no feature of treatment is more important than properly selected work, and the patients seem much happier in pursuing this accustomed work than sitting idly in the wards. The great surgeon of the Northwest, Dr. Nicholas Senn, who visited Brazil last year, visited Dr. Maximilian Carl Bansen's Insane Hospital, a brief extract from his letter is of great interest. Dr. Bansen, a German physician of more than national repute, has charge, and to his great learning and executive abilities and enthusiasm, is due the great success of the institution. The hospital is surrounded by a magnificent flower and vegetable garden. The flower wealth of the garden can be approximately estimated from the fact that it contains 160 varieties of roses. The remaining part of the grounds supply the asylum with coffee, bananas and other tropical fruits. According to the statistics, including many years, 50 per cent. of those admitted recover their mental equilibrium, and of those discharged cured only 2 per cent. have been known to suffer relapse.

This marvellous result is secured by the methods employed in the treatment. Dr. Bansen places the greatest stress on abstracting the patients' minds by giving them employment which does not tax the mental faculties, that is physical exercise and mental rest. Dr. Bansen regards the excessive use of the strong alcoholic native liquor as the most important factor in provoking the disease. He looks upon coffee and all stimulants as harmful.

The President of the New York State Commission on Lunacy, Dr. Frederick Peterson, one of the most distinguished men in this country, writes in the September number of a Philadelphia journal an article entitled "The State Care and Supervision of the Insane." He says we have emergency hospitals for broken bones or acute fevers, but when the most important organ of the body, the brain, becomes affected with an acute disease, the emergency hospital is the jail. It is an axiom among physicians that early diagnosis and speedy treatment are of paramount importance in nearly all acute cases of insanity. Surely nothing could be worse for a delirious mind than the sight of police officials and prison walls. Legislators have seemed too often to regard the insane as malefactors and too seldom as sufferers from

serious illness requiring immediate nursing and medical attention. It is unfortunately true that insanity is prone to run a chronic course. Disorders of the delicate mechanism of the brain, unlike diseases affecting other tissues of the body, are usually tedious in their progress, and all too frequently permanent in their effects. In the State of New York, for instance, the excess in the number of patients received in asylums above the number discharged is between six and seven hundred every year. The enormous number of chronic and so-called incurables are physically strong and well, and able to work. Their work has an economic value, and occupation is, moreover, one of the best remedial agents at our disposition in the treatment of the insane. All authorities agree that more is accomplished by appealing to the mind than by any form of medication. He says, further, the Twentieth century finds a remarkable development in clinical and laboratory methods of research in the domain of morbid psychology, and it is the duty of the State to encourage a work whose far-reaching results will benefit the insane by improving our methods of care, treatment and cure.

Mr. Charles F. Taylor and myself were appointed as delegates to the Society of Superintendents of Asylums that met in Washington in May last. We also visited the Manhattan State Hospital at New York. That visit was of great interest, the industrial feature particularly; 83 per cent. of the entire hospital population is daily engaged in some useful employment. In the industrial department a large sewing room furnished employment for about 150 women patients, who make all the outer garments in the way of dresses, cloaks, aprons, etc., for the women patients, and suits, shirts and overcoats for the men patients, and also do the repairing. In the sewing room they have sixteen sewing machines, which are run by electricity. Also, in another department of the sewing room, automatic smoothing irons heated by electricity for pressing clothes. In one room patients are engaged in making mats, rugs, also rag carpets (by means of two looms). There were brushes, cushions, mattresses made, repairing cane bottom chairs, etc., while a few were making fancy work. Aside from the sewing room many patients are employed at sewing in the wards, making pillow-cases, towels, and doing repair work, etc.; 130 women are steadily employed in the different departments of the laundry. They are the chronic cases. Others assist in the kitchen and at cleaning vegetables. About 70 are employed at out of door work in the greenhouse and gardens; others on the lawn, it being light work, pulling

weeds, raking out grass. These are supervised by women attendants and are divided into parties of 12 or 15. The greenhouse is cared for by women patients only. This method of employing women patients is a feature of this hospital. I could detain you for hours quoting similar testimony, and only ask your indulgence to report one other asylum man's opinion, as he not only endorses what I have quoted, but goes further and advocates educational work. This gentleman is Dr. James B. Russell, of Hamelton, Ontario, Canada, who is the peer of any in his line of work. He says the Twentieth century asylum must be on educational and industrial lines; the success which has attended the education and development of the idiot and feeble-minded should encourage us to go forward. The death knell of drowsy indolence must be rung, and the gospel of mental and physical activity be proclaimed. Mental and physical inertia means loss of function, degeneration and death. Well regulated activity means development of function, power and life.

The advent of a new psychiatry, not based on hospital ideas, but a newer and richer field of psychic stimulation on educational and industrial lines must be adopted. We must get out of the dull and stupid routine of the past, and with our minds ablaze reach out to a higher plane of success in the future; mental and physical activity is the keynote; there must be no drones in the asylum hives; the brightest minds and the most powerful physique will wither and die for want of exercise.

Before closing I desire to give my views with regard to lessening cruelties and undue restraint, which are too often inflicted on asylum patients. First of all, there must be a competent head to the institution and efficient assistant physicians. They must be men of character and men of ability, men of energy and conscientious desire to aid those unfortunate people committed to their care. Psychology is the most difficult of all subjects to master; therefore it acquires men who desire to make insanity a specialty, and these men should be given all the facilities necessary to become well versed in this intricate study. An annual report should be required of them as to their work, which should be exchanged for similar reports of other institutions. This would, in course of time, develop information that would be of inestimable value. As it is now, with the exception of a few institutions, all this valuable material is allowed to go to waste. It is lamentable to state, but nevertheless true, that most of these institutions are so many political machines; the positions in them are given to

political rewards rather than on account of competency. The object for which these institutions were built appears to be lost sight of, the patients are secondary considerations. When newspapers publish in conspicuous head lines the cruelties inflicted on insane patients at asylums and give the name of reputable persons who witness the acts, when the commissioners investigate such reports they are condemned by politicians, is it any wonder that cruelties occur and investigations are suppressed? The attendant is the most important selection of all asylum help, and great responsibility rests upon the superintendent in this regard. Competent persons, as a rule, can not be secured at the compensation given.

Attendants at an insane institution should have qualifications different from the ordinary trained nurse, as their duties are so very different. Every asylum should have systematic lectures given the attendants by the medical staff, and train them in the management of the insane. The attendants should have incentives to perform their duties other than their little monthly pay. They should be given, after a specified time of satisfactory service, an increase of wages. Furthermore, a handsome certificate should be given any attendant when he or she leaves the institution after a three years' term, and their daily record report showed they were entitled to it. This certificate I consider of great importance, and will be the greatest incentive of all, as it would secure employment in similar institutions without difficulty. Physicians should daily examine the more rational patients (and they are not a few) as to any undue restraint or harshness practiced on the patients. Let the commissioners who are required by law to visit the wards also examine them as to undue restraint. If this was practiced, what an impression on the patients in convincing them of the interest taken in them. The result would be that they would have less fear and hesitancy in speaking out and telling what they know, and those who have them in charge would be deterred from giving way to their impatience and temper. Cruel treatment is on the male side of the institution, and the most efficient means of preventing improper treatment is to have female attendants assisted by orderlies. We all know the calming influence of women in a sick room. Their gentleness and persuasiveness is what most patients require. It is exceedingly rare that an insane patient can not be managed by kindness. This system is in vogue in a few institutions, and the reports are so satisfactory that it is amazing that it is not more generally adopted. The only reason that it is not is that it is much

more expensive. No orderly would dare handle patients roughly in the presence of women. It is harshness that arouses the belligerency of the insane. Every physician should reckon this subject as a sacred duty, and properly inform their friends and the public in regard to asylum matters.

It certainly seems only simple justice that medical science shall not longer be cheated of knowledge to be gained by scientific investigation, and it has a right for humanity's sake to demand that medical science be allowed to glean all the knowledge that careful study will acquire, and permit the world to profit by the opportunity to gain valuable facts that are now so prodigally wasted.

ANTIDIPHTHERITIC SERUM.

BY HUGH BOYD, M.D.

This serum, the result of the experiment of Ronx, Behring, Kitasato and others, is the crowning feature of serum therapy. An account of the steps leading to its discovery will form one of the most interesting pages of experimentation that will ever be written. The use of this serum in diphtheria is now doubted by few physicians, and the enormous amount of evidence is in favor of its specific value. Diphtheria antitoxine has reduced the mortality of diphtheria at least two-thirds, it has no serious after effects, and protection is assured to exposed patients from two to six weeks after immunizing doses are given.

It is put up in packages containing doses of 1000, 2000, 3000, 4000 units, the last two being the ones most generally accepted as enough to produce a cure. The method of obtaining this product is quite a complicated one, and will be given in detail as follows: The first step in the progress is the securing of virulent diphtheria germs (*Klebs-Löffler bacilli*). This is grown in a culture that will in from six to eight days produce a toxine of which a very small amount will kill a guinea pig of a definite weight within three or four days. These cultures are then placed in bouillon which is especially prepared to grow the diphtheria germ for eight or ten days. It is then tested microscopically to see that it is a pure culture; it is then filtered and freed of all germs. The fluid is then known as toxine, and is tested on guinea pigs to determine its strength. These toxines are now

injected into horses in varying amounts, beginning with a small amount, and increasing as the animals are enabled to withstand the toxine. In the process of time horses will stand a large amount of this strong toxine injected three times a week. These animals, before being accepted, are tested with tuberculine for the presence of tuberculosis. In addition to this, a careful chemical and biological test of the blood is made of each horse; from time to time small bleedings are made of these immunized horses in order to determine the progress of the immunizing process. Some horses will produce antitoxine within three months of the time of beginning treatment, but usually the period of the production of antitoxine does not show until after from six months to one year of treatment. Horses whose blood shows that the degree of immunization is at its highest are bled from the jugular vein and the blood received into a vessel, and at once transferred to a cold storage plant, where the separation of the serum can take place more readily. After three or four days the serum is siphoned off into sterilized containers. The addition of antiseptics is not necessary, and is of no particular advantage, the fluid passing direct from the horse to the patient without coming in contact with the air. The next step in the progress is the testing of the antitoxine as to its strength. As this is one of the most important steps, it has to be conducted with the greatest care. There are two unknown qualities to determine—the first to determine the strength of the toxine, and the next of the antitoxine. Having determined the first, the latter is easily found out. A series of guinea pigs are taken weighing a definite number of grams each, and are injected with varying amounts of toxine. The least amount which has proved fatal will be used in the succeeding test of the antitoxine, and will be known as the minimum fatal dose. Another series of pigs are taken weighing about the same amount as before, and each pig is injected with ten times the amount of toxine which has killed the pigs that have received the smallest amount of toxine, at the same time this series of pigs are given varying amounts of antitoxine. Those pigs which have received the smallest amount of antitoxine will probably die. The dose of antitoxine administered in the smallest amount to the pig continuing to live is considered the minimum dose, antidotal to ten fatal doses, and as a unit is the amount of antitoxine which will save a pig from a hundred fatal doses of toxine, the number of units can readily be determined. The severity of the case of diphtheria is the guide for the number of units of antitoxine to be administered by the physician in charge.

MODE OF TRANSMISSION OF INFECTIOUS AND CONTAGIOUS DISEASES.*

BY DR. TWING MARSHALL, M.D.

Bliss wisely said in discussing atypical cases, "Whatever may be said of a nomenclature which shall act as a means of communication among medical men, there remains the fact that disease will not allow itself to be confined within its limits."

I wish to discuss this subject (infection and contagion) under three headings:

1. Is there a need for the two terms, or are they synonymous, only differing in degree?
2. Is there any definite rule practical enough to be applied to general practice?
3. Is not the communicability of many diseases greatly exaggerated?

Is there a need for the two terms infection and contagion? Lewis' large Latin Dictionary defines these words as follows: Contagion from *con* and *tagio*—a touching with. Infection from *inficio*, *in* and *facere*—to put in.

Billings' Medical Dictionary: Contagion, *contagio*—By direct contact called **personal contagion**.

Infection—*Infectio* was formerly applied to communication of disease without personal contact, but is now often used as synonymous with contagion, but is usually understood to refer to things rather than to persons.

Gould's large Medical Dictionary: *Infection* means the communication of disease germs or virus by any means, direct or indirect.

Contagion—The process by which a disease is communicated between persons either by direct contact or by means of an intermediate agent.

Quaine: There is much ambiguity and want of precision in the application of these terms. Usually they are coupled with diseases which are known to be capable of transmission from one individual to another of the same species.

I do not desire to bore you with a discussion similar to the one whether it was the match or the flame from the ignited match which caused the fire, for in that proposition I can see no advantage to be gained from discussion; therefore I will ignore the question of how

*Read before the New York Academy of Medicine, January 12, 1890.

the cause of disease enters, and limit myself to the transmission of the cause from one host to another.

There are certain diseases which I believe are not transmitted through the atmosphere. Whether it is the active that cause is too heavy, or that it is not transmitted in a dried state I do not know, but the fact remains that they do not pass through the air. Some that I believe belong to this class may be disputed, so I will not mention but one in this department of my paper, and that is syphilis. I do not believe any doctor would consider the assertion that a gentleman can become infected with syphilis simply by being in the same room with a syphilitic. We believe a solution of continuity must have come in contact with something on which the virus of syphilis rested. Now, that I consider contagion. (Contagious disease by direct contact).

Syphilis is contagious, but not infectious. There are diseases that are pre-eminently infectious. Influenza is, in my opinion, the most infectious trouble known to man. What is its danger or striking limit I do not know. Of course different epidemics vary, but in a fairly malignant type I believe it is infectious easily across an ordinary bed room.

This is not new, but it is the suggestion of the resumption of usage which has been in abeyance.

Contagion is by actual contact, not only from person to person, but in some cases by a solid or liquid medium. Infection is transmission through the air.

I think we need these terms in studying prophylaxis, and the better we understand the methods of conveying disease the more likely will we be able to block their transmission. Let us restrict these terms to a definite meaning, and use them with great care and thought.

Have we overstated contagiousness? The subject of contagion has interested me more than any other in the whole field of medicine. The profession is so completely and entirely dependent to-day upon the germ theory of disease that no other is much considered by the average practitioner. An organism of some kind is considered the specific cause of every malady. Professor Behring, at the recent congress of German naturalists and medical men, expresses the opinion that communication of pulmonary tuberculosis to adults by contagion has not yet been demonstrated. He takes the position that the soil as well as the seed is essential for its development, and from the wide distribution of the parasite the former is, perhaps, more important than the latter. A few years since the health officer of New York City placed himself

forcibly before the world as opposed to the idea of the easy transmission of any of the contagious diseases by means of clothes. He cited his and his associates wide experience in this field, and was confident that this avenue of transmission was greatly exaggerated.

The cases in medical literature which are cited to prove the reverse side of this proposition should be closely analyzed. I remember the account of a German professor who attended a case of scarlet fever toward the close of the cold weather one year. It was the last time he wore his fur-lined circular cape that season. The cape was stored away, and not taken out until the following winter. At one of the first houses he entered with it on in due season there developed a case of scarlet fever. The professor's cape is charged with producing it. His ordinary housewife, knowing the value of a fur-lined circular, uses some little care in storing it away. The story says it was simply hung in a press, which was probably an error.

Surely no German housewife would fail to brush, sun and clean fur before storing it. The very things to have destroyed the germ were it present. During the wearing of this contagious cape, did the professor see no other children? Lastly, did no capes or other materials that had been exposed to scarlet fever come within striking distance of this child?

Do not misunderstand me. I do not object to every precaution being used to avoid the transmission of contagious diseases. The exaggeration of faddists in this line probably serves a purpose, but we should not willingly delude ourselves. In my experience, extending over twenty years, I have never seen more than one case of diphtheria in any household under my care. My experience may be unique, but others have told me of a similar experience. And they nor I had used antitoxine as a prophylactic. I know that the extremely conservative members of our profession look on diphtheria as only transmitted by contact, and the majority think it not extremely contagious.

Small-pox I have seen but few cases of, never but one at a time in a private family. Scarlet fever I have often seen more than one case in a family, but I have never seen it go right through the whole family of children. Repeatedly, in a family of three or more children, I have seen but one child have the disease. Time and time again I have seen numbers of children exposed, and only one or a very small number be attacked.

Measles I think much more vicious. It is the exception that when

a family is attacked that many escape having this trouble.

Mumps is about as contagious as measles. Chicken-pox is still more contagious than measles or mumps.

I have never seen any reason to accept the theory that pneumonia was infectious. How it is transmitted I do not know. So rare do we come in contact with second and third cases of pneumonia in a family close enough together to be charged to contagion, that such contention has always made my credulity smile at how a man can convince himself of anything he desires. There is absolutely no reasonable evidence to make one believe that typhoid fever is the least infectious. Tuberculosis has impressed me certainly as transmissible by infection from adult to adult, with all due respect to Professor Behring. However, it has been on the side of the confinement, vitiated atmosphere, loss of rest and depression of spirits, followed by loss of appetite and irregular eating, produced by missing a loved one dying with tuberculosis, which produced a favorable receptive condition.

I believe, firmly believe that a robust body, properly nourished, rested and protected from the inclemencies of weather, is practically immuned from any disease.

To me probably the most contagious of all diseases is influenza, and yet even that I believe has to have some gap left open for it to enter. Loss of rest, overwork, mental or physical, worry, anxiety, exposure to wet or to extremes of temperature, irregular eating, either as to time, quality or quantity, and overloading the system, is quite as capable of producing the gap as overfeeding.

To summarize, I believe the transmission of disease has been greatly exaggerated, and the receptive condition of the host has been overlooked, and suggest not the slightest let up in the methods of prophylaxis for fighting the contagion, but urging the greater general care of the body to keep it so strong as to make it impregnable to the assaults of the contagion.

Lastly, I would take the stand that all infectious diseases are contagious, but all contagious diseases are not infectious.

Syphilis, gonorrhea, erysipelas, typhoid fever, diphtheria, septicemia and pyemia are contagious, but not infectious.

Influenza, mumps, chicken-pox, measles, scarlet fever and small-pox are both infectious and contagious.

Making such a contention as a general practitioner, we can attend contagious diseases without handling or coming in contact with the patient, and continue upon our general rounds. For over ten years I

have attended repeatedly cases of erysipelas, being careful not to touch the patient or anything in his room with which he had come in contact, and then after attending surgical cases with the usual precaution of cleansing my hands. I have hundreds of times had union by first intention in these cases. I place erysipelas on the same footing as any other septicemia. Look at the abdominal surgeon. Because he operates in the morning on a pus case he would not refuse to operate in the afternoon on another case where he did not expect to find pus.

Selections.

THE CAUSATION AND TREATMENT OF ECLAMPSIA

BY A. LAPHORN SMITH, M.D.

Consulting Gynecologist to the Women's Maternity Hospital, Montreal; Professor of Gynecology in the University of Vermont, and of Clinical Gynecology in Bishop University, Montreal; Gynecologist to the Samaritan and Western General Hospital and to the Montreal Dispensary.

In the April number of the *Annals* there is an excellent report of a most interesting meeting of the Obstetrical Society of Philadelphia, in which two papers by Dr. Charles S. Barnes and Wilmer Krusen on the "Etiology and Treatment of Eclampsia" respectively were read, and which gave rise to a most instructive discussion. As no one, however, had a very positive opinion as to the cause of the condition, I would like to draw further attention to the theory which I advanced at a meeting of the Medico Chirurgical Society of Montreal about a year ago, namely, that eclampsia is due to anemia of the corpora striata of the brain, or such other parts of the brain centers as control muscular movements. This anemia is brought about by a spasm of the arterioles which carry blood to the part; but the spasm is not limited to these arterioles alone; every capillary in the body is probably equally affected by the spasm, so that as the quantity of poisonous material not necessarily urea, accumulated in the blood increases, the arterioles of the kidneys contract tighter and tighter until no more blood can get into them, and the spasm-exciting material rapidly increases in a vicious circle. As the spasm-producing toxines increase, the arterioles of the brain tighten up, causing disorders of vision and headache, and when the quantity of spasm-producing material has increased still more the circulation of blood through the kidneys comes to a stop, the circulation in the brain practically comes to a stop also, and the patient loses consciousness, and unconscious or reflex movements called convulsions begin. The heart acts in correspondence with the vasomotor system, so that the same poison which causes the spasm of the arterioles of the kidneys and of the brain also causes excited action of the heart, which is increased still further by the throwing of all the peripheral blood into the large veins and arteries, as is evidenced by the pulmonary obstruction. With this theory of spasm, and with it alone, can we answer any questions that may be put to us concerning the treatment.

What is the best treatment of eclampsia? One that will in the

quickest possible manner and with the least possible danger put an end to that fearful vasomotor spasm and allow the blood to rush into the brain and kidneys so that the woman may regain consciousness, and so that her kidneys may at once begin to eliminate the toxin which causes the spasm. Within three minutes of seeing the case I administer a half or three-quarters of a grain of morphine. Is there any other drug which has a remarkable and almost specific power to relax the spasm without doing any harm? Yes; ten drops of tincture of veratrum viride hypodermically will relax that spasm in ten or fifteen minutes; we can not see the arterioles dilating under its influence, but we know that it is dilating them by our finger on the pulse; we feel the pulse coming down from 100 to 60 and even 40, growing softer as it slows. Whether the heart beats a hundred and sixty or only forty is not so important except as an indication that there is a let up in the spasm of the whole vasomotor system, which is a matter of life and death; in the three cases in which I have used it there was no convulsion later than fifteen minutes after the first injection. When I returned from the meeting of the American Gynecological Society, where Dr. Reamy first advocated this remedy, I requested one of my pupils, Dr. De Cotret, who had just been appointed Director of the largest lying-in hospital in Canada, to try this remedy, and so far he has employed it in over forty cases without a death; no case of eclampsia has died in the institution since the veratrum treatment was instituted. Such being the case, I feel it a duty to try and induce others who have many cases every year, and of which a large proportion die, to adopt the treatment I have indicated, namely, a hypodermic of morphine, followed in five minutes by a hypodermic of ten minims of tincture of veratrum viride, repeated every ten minutes until the convulsions stop or the pulse comes down to forty. Then give a quart of salt solution by enema; it will be quickly absorbed by the rectum, and as the arterioles of the kidneys relaxes, the water will rush into them, and in half an hour there will be a copious secretion of poison-laden urine. No chloroform will be needed, and no chloral, which latter drug has caused so many deaths ascribed to other causes; no accouchement force; just wait until the woman falls into a quiet slumber, half an hour in my three cases, and go home. There will be a normal labor and probably a dead fetus in a day or a week. You may get a fright when the pulse comes down to forty, but there is nothing to fear; I have not been able to find or hear of a case of eclampsia treated with morphia and veratrum but without chloral or chloroform that died. I firmly believe that the

administration of a pound of chloroform in twenty-four or forty-eight hours, at the end of which time the woman died, is quite enough to cause her death without eclampsia. In the discussion at Philadelphia above referred to, every one who had used veratrum spoke well of it; why should not every one use a remedy which has given such wonderful results. It was the witnessing of the immediate benefits following its administration which led me to evolve my theory of spasm of the vasomotor system which has been favorably received by at least one physiologist of world-wide reputation. My article was published in a small local journal, and was, therefore, for the time being buried; but I trust that its wide publicity in the *Annals* will lead to the general adoption of the spasm theory and of the life-saving veratrum viride treatment.—*Annals of Gynecology and Pediatrics*.

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The following from the Boston Medical and Surgical Journal will be of considerable interest to those who have watched recent development along the line of the Finsen Light.

THE FINSEN LIGHT CURE.

BY H. JOHN STEWART, M.D.

Having read and heard so much about the Finsen Light treatment in the cure of disease, I decided in April of this year to make a personal investigation to see and learn for myself if it was true that such diseases as lupus and rodent ulcer could be cured by light. I visited several institutions where the Finsen Lamp was in operation. In Manchester, England, in the Salford Skin Hospital, they had a Finsen Light department under the supervision of Professor Brooke, who informed me they were unable to treat half the sufferers who applied for treatment, and they had solicited, by public subscription, \$125,000 for the erection of a new hospital for skin diseases, where they would be enabled to enlarge the "light department," so at least two hundred people could be treated daily, as there were people on their waiting list whom they would be unable to treat, with their present facilities, for an indefinite time. Professor Brooke was most enthusiastic over the wonderful results they were attaining there.

I next visited the London General Hospital of London, England, and found they were just completing an immense light department

that had been established by the present Queen of England, then Princess of Wales, in 1900, who presented the first lamp at that time, and as it was found to be far too inadequate, she had just given a second lamp, and Alfred Harmsworth had also given \$50,000 for the perpetual endowment of another Finsen Lamp in this department, and they were then building a platform to receive the King and Queen, whom they expected to come July 11th to dedicate this new department, and even with these increased facilities I was informed by Professor Sequirey there were patients on the waiting list who were unable to receive treatment.

I next visited the Light Institute at Copenhagen, and found that all the statements that had been made regarding the Finsen Light were not in the least exaggerated. I had the pleasure of meeting and studying under Professor Finsen himself, and was extended every courtesy by Professor Finsen and his associates at this institution. He seemed very much pleased to describe in the minutest detail the apparatus, treatment, etc., and gave me a detailed history of the Finsen Light.

The Finsen Light is a large, specially constructed arc lamp of 20,000 candle power, or twenty times stronger than an ordinary street lamp, and uses from sixty to eighty amperes of current. This lamp burns a specially made carbon which can only be procured at Copenhagen. In the upper holder is a large carbon, while a smaller one is used in the bottom holder; when properly adjusted for arcing a minimum number of violet and ultra-violet rays are produced. The advantage of the Finsen Light over others is in the great number of violet rays produced. The Finsen Lamp produces a much greater number of chemical rays than sunlight, as the atmosphere absorbs a large percentage of these rays. The light is so intense it is impossible to look at it with the naked eye, and it is necessary for all the attendants and patients to wear dense smoked glasses while the lamp is in operation; an aluminum hood about two feet wide surrounds the lamp, which hood is fringed on its lower border with a deep crimson-colored paper skirt to further aid in excluding the diffused light from the patients.

The concentrated rays are carried from the arc to the patients through four telescopic tubes, known as converging tubes, suspended at an angle of forty-five degrees, the tubes containing a series of rock crystal lenses so arranged that reservoirs for running water exist between them. By means of the water screen and rock crystal lenses, all rays but the violet are eliminated, and these rays are converged and concen-

trated, thus vastly increasing the healing and bactericidal effects.

The heat from the original arc is so intense that to prevent cracking of the lenses and discomfort to the patients a stream of cold water is kept constantly circulating through the reservoirs or water screens.

To further concentrate and cool the rays a compressor is provided, which consists of two rock crystal lenses so arranged that a chamber for running water exists between them. This part of the apparatus is used to compress the affected area and make it bloodless during the treatment, thus facilitating deeper penetration. The Finsen arc light has been used with marked success in curing many skin diseases, thought until this time incurable, especially lupus and rodent ulcer. During a period of six years the Finsen Medical Light Institute at Copenhagen has grown from a very small shed, where they were only able to treat one patient at a time, to a magnificent institution, where they are now treating three hundred people daily, and light institutes have been established in London, England; St. Petersburg, Russia; Paris, France, and Chicago, Ill., where they are all carrying on a similar work to the parent institution.

It has been a popular belief that lupus was a very rare disease and common only in the northern countries, and although it was supposed there was no lupus in London, yet the hospitals are now treating 175 daily, and the management was compelled to install two more lamps and build a separate department, so great has been the demand from people seeking relief. Lupus was considered very rare in the United States, but since the establishment of the Finsen Light Institute in Chicago the author is informed they have been taxed to their utmost capacity, and they too, have found it necessary to increase their facilities, as there are now patients on the waiting list who are not able to receive treatment. It seems but a question of a short time when light institutes will be established in every large city in America, because it has proven so efficacious in many other skin diseases, besides lupus and rodent ulcer, such as acne, alopecia, areata, localized eczema, chronic ulcers and nevus. The treatments are given while the patients recline on couches. By firm pressure with the compressors on the tissue to be treated, the blood is removed and more heat can be borne and deeper penetration produced; this compression has another important advantage in that the bactericidal effect is greater because it has been shown that the corpuscles absorb a considerable portion of the rays and thus prevent deep penetration.

The affected area is placed about ten inches from the distal end of

the converging apparatus, and the treatments, or seances as they are called, take about one hour daily in lupus and rodent ulcer, and in other skin diseases from ten to twenty minutes, depending upon each individual case.

The results attained have been hardly less than marvelous, since from carefully compiled statistics covering a series of over eight hundred cases of lupus treated at the Finsen Institute an overwhelming percentage of cures and an insignificant number of failures is shown, and Professor Finsen goes so far as to say that in lupus vulgaris cures can be obtained in 97 per cent. of cases, even where the whole face is involved. In these eight hundred patients, with ages ranging from five to seventy-four years, the average duration of disease was eleven years. This treatment has an advantage over the X-ray in that there is no danger of burning and consequent sloughing. With the light treatment we are dealing with a known quantity, while with the X-ray we have an unknown quantity of uncertain action.

The light treatment causes no pain; a red erythematous spot and blister appears where the light is applied, and in five or six days the scab falls off and the ulcer is healed beneath, and the skin is left free from scar or cicatrix, but red; the redness, however, after a variable period fades and leaves the skin white and uncontracted, except where there has been a loss of tissue from the disease before treatment.

In conclusion, the author would state that the possibilities for the light treatment in the curing of diseases are still unknown, and believes in a limited time it will take an exalted position in the field of medicine and surgery.

—Progress—
of
Medical and Surgical Science.

Clinical Lecture on Epithelioma at Massachusetts General Hospital.—J. Collins Warren calls attention to the two principal varieties of epithelioma. One is almost a malign growth and the other approaches more nearly to cancer in a clinical sense. In cancers of the skin two varieties must be recognized: First, a very superficial type known as the rodent ulcer, a small-celled epithelial cancer, and second a polymorphous-celled type characterized by larger cells, among which the characteristic nest of cells occur. The type of the former of these two varieties is the rodent ulcer of the face; types of the latter form are cancers of the lip; of the back of the hand, and of the penis. The writer goes on to describe the history of rodent ulcer, so well known to the clinician. It has an early stage when the growth is very slow, then suddenly it becomes more rapid. It begins with roughness of the surface, with a tendency to scab formation. An ulcer is finally formed. The diseased process sometimes goes on forty years or more. Examination shows no enlargement of the lymphatic glands. This is a very characteristic feature of the disease, which makes the prognosis more encouraging. The more malignant type, such as cancer of the lip, is generally associated with enlarged glands. It is now pretty generally admitted that X-ray therapy has a favorable influence upon very superficial carcinomata, but that the more deeply seated growths are not affected by it. It seems hardly justifiable to lose valuable time in treating a cancer of the lip, or any of its allied forms elsewhere on the body, in their earliest stages with X-rays. Prompt extirpation is indicated. In the earliest stages of rodent ulcer the removal is so easily and painlessly accomplished by the aid of subcutaneous injections of cocaine and the knife, that it is hardly necessary to consider the influence of the rays upon them. The same is true of growths ranging in size up to a quarter of a dollar, unless their removal would result in considerable deformity. The writer closes with a plea for more radical operations for cancer of the lip than are usually performed. He believes that the practice of incomplete "ambulatory" operations, with the aid of cocaine anesthesia, can not be too strongly condemned. The X-ray therapist should make himself thoroughly familiar with the more advanced and malignant phases of rodent ulcer if he wishes to make an intelligent selection of cases for treatment.—*Medical Record*, January 30, 1904.

Sterile Water Anesthesia in the Office Treatment of Rectal Diseases.

From an experience of one hundred and fifty cases S. G. Gant is convinced that sterile water fulfills all the requirements of a local anesthetic in rectal affections calling for operations. All the common lesions have been operated on without any unpleasant effects. The temperature of the water is immaterial. Pain and bleeding are less than when drugs are used. The anesthesia is complete and instantly follows the injection, provided the latter has lightly distended the tissues to be attacked. There is no danger to any internal organ or function. The only requirements are a syringe, needle and boiled water. The author states that the radical treatment of hemorrhoids can be so easily carried out under this method in the physician's office, with so little danger and inconvenience to the patient, that it should relegate to oblivion the much-vaunted injection treatment, which is so dangerous and uncertain.—*Medical Record*, January 30, 1904.

Puerperal Sepsis and Its Treatment by Iodine. W. R. Pryor combats the obstetrical teaching that in most cases of puerperal sepsis the infection remains localized in the uterus. His own experience has forced him to conclude that in streptococcic septic puerperal fever, pelvic lymphangitis and phlebitis are early complications. In a given case he seeks to isolate the infected uterus between masses of iodoform gauze (details for the preparation of which are given) and by local and systemic iodine to destroy the cocci. He irrigates the uterus and packs it full of gauze, 10 per cent. strength. The posterior cul-de-sac is then opened by a broad incision, adhesions separated, the uterus lifted and the pelvis packed full of gauze, 5 per cent. From ten to fifteen gauze strips one yard long and eight inches wide are thus used. Cardiac stimulants are given as indicated and a self-containing catheter is inserted. The urine is tested from time to time for iodine. From an experience of thirty-seven personal cases and sixteen in the practice of other operators, Pryor is convinced that this procedure offers much better results than does hysterectomy. Of the fifty-three cases enumerated, a previous curetting had been done in ten, and of these, three died. In forty-three cases not previously operated on, but one died.—*Medical Record*, January 30, 1904.

The Modern Treatment of Wounds.—Walter Lathrop states that he has had under his care during the past four years nearly two thousand wounds of various kinds. The majority of wounds which railway surgeons are called upon to treat are of the lacerated variety. In treating this type of wound, hemorrhage should be checked and the wound and surrounding parts then carefully cleansed. If the injury is severe, the patient should be etherized, so that the cleaning of the

wound may be thorough. The writer prefers formaldehyde soap, 10 per cent., to begin with, followed by mercuric chloride solution and sterile water. The skin is trimmed where it is necessary, and the wound converted, as nearly as possible, into an incised one. Several tendons are united, and the injured member dressed with sterilized gauze and cotton. A dusting powder may be used if advisable. Drainage is sometimes necessary. The writer then uses sterile or iodoform (5 per cent.) gauze. If the wound has clean-cut edges, the aseptic procedure should be thorough, in order that primary union may take place. The subject of infection is most important. The writer believes that the injudicious use of poultices is the cause of more cases of infected wounds, abscesses, diffuse cellulitis and septicemia than any other agent except direct infection. The common poultice is a hot bed for bacteria. The one great agent in combating infection is carbolic acid. In cases seen late, in which the septic process has invaded the system, the use of antistreptococcus serum is very valuable. In gunshot wound of the extremities the Roentgen ray is a great help in locating the bullet, and makes its removal easy.—*American Medicine*, Jan. 23, 1904; *Medical Record*, Jan. 30, 1904.

The Treatment of Post-partum Hemorrhage.—Fritsch says that post-partum hemorrhage due to atony is usually improper management of the third stage, *i. e.*, under haste to express the placenta or premature massage of the fundus. This causes partial separation of the placenta while the uterine is still unable to contract firmly on account of its contents. Packing the uterus requires time and experience, and considerable blood is lost in executing it. The author's method consists in seizing the uterus with both hands and expelling all coagula, and then lifting it upward and forward so as to antevert it forcibly over the symphysis. The abdominal wall is then pushed deeply into the pelvis behind the uterus and the depression so formed filled with towels, cloths, gauze, or anything available. This mass is secured by several turns of a bandage very firmly applied, and one or two more turns are placed over the fundus so as to press it against the posterior pad. In this way the uterine cavity is obliterated so that no further bleeding can occur, and no asepsis or intrauterine after treatment required. The apparatus does not give pain, and is removed at the end of eight to twelve hours. Suturing lacerations to check hemorrhage is poor practice, because it is not possible to carry the needle deep enough without risk of injury to the ureter, and tamponade is not effective if a large vessel is torn across. The author has found the following the best plan: Remove the placenta and press the uterus deep into the pelvis with the right hand. Catch the labia majora with the fingers of the left hand and push the vulva upward as if to meet the uterus. Forceful pressure in this way obliterates all dead space, and at the end of one-half to three-quarters of an hour the upper hand may be replaced by a sandbag or other suitable heavy object.—*Medical Record*, January 30, 1904.

Book Reviews.

CRUSADE AGAINST TUBERCULOSIS—TUBERCULOSIS A CURABLE AND PREVENTIBLE DISEASE; WHAT A LAYMAN SHOULD KNOW ABOUT IT. By Lawrence L. Flick, M.D., Founder of the Pennsylvania Society for the Prevention of Tuberculosis; President of the Free Hospital for the Poor Consumptives of Pennsylvania; Medical Director for the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. Published by David McKay, 1022 Market Street, Philadelphia: 1903.

This excellent little book, though addressed to the laymen, is well worth the careful study of every medical man; it is lucid, concise and thoroughly scientific.

The author has exercised art in expressing himself in such simple style as to teach the layman without burdening him, and yet he so deals with the technique as to require the scientific man's consideration.

His article on tuberculosis, a disease contracted by association and from environment and not an inherited curse, is one step toward educating the people to appreciate the fact that it is not essential for them to have a tuberculous family history in order to become tuberculous, and that professional advice should not be postponed in so-called repeated attacks of cold.

The chapter dealing with tuberculosis as a disease whose contagiousness is restricted within certain limits, when considered by the people will no doubt lessen the hardships of the poor unfortunate tuberculous.

In dealing with hygiene, he beautifully demonstrates that cleanliness, fresh air and sunlight not only destroy the habitat of bacteria, but reduces the predisposing causes of infection to a minimum.

Could every individual read this book, and would they abide by the advice therein, it would be a blessing to humanity.

The publisher deserves credit for his next work.

ARTERIA UTERINA OVARICA; OR, THE GENITAL VASCULAR CIRCLE.—Anatomy and Physiology, with their Application in Diagnosis and Surgical Intervention. By Byron Robinson, B.S., M.D. Chicago, Ill.: E. H. Colegrove, 1903.

The above is a book of 182 pages, abundantly illustrated with sketches, diagrams and half-tones of X-ray prints. Its reading thoroughly exhausts the text, and shows the author's familiarity with

the subject. The illustrations elucidate the many complex anatomical features of the pelvic circulation in an admirable manner. The chapter on the history of the demonstration of these anatomical relations is very interesting, the original investigator having mention in connection with the results he put forth.

The book is bound well, and will be a valuable aid to the pelvic surgeon.

MEDICAL JURISPRUDENCE.—By Edwin Willis Dwight, M.D. instructor in legal medicine, Harvard University. Philadelphia: Lea Bros. & Co., 1903.

The above belongs to the medical epitome series, edited by Pedersen, and is a neat specimen of the publisher's art, and contains 243 pages of text. As per the author's preface, it is a compendium of facts, briefly stated in connection with the text, and not intended to be a text book on legal medicine. It is an excellent manual for students, however, who would profit considerably by the study or perusal of its contents, thereby preparing them for further research on this subject, or fortifying them with a general knowledge of medical law.

THE PRACTICAL CARE OF THE BABY.—By Theron Wendell Kilner, M.D., Associated Professor of Diseases of Children in New York School of Clinical Medicine; Assistant Physician to Out-Patient Department of Babies' Hospital, New York; Attending Physician to Child Department of West Side German Dispensary, New York. Philadelphia: F. A. Davis Co., 1903.

This little book of 155 pages is one of the most valuable actual working manuals for the inexperienced and experienced mother and nurse, both of whom can appreciate its contents and thorough, practical advice. With this little volume one can appease the daily wants of the baby, and it is especially to be recommended for its clothing and feeding. The book should be in all mothers' hands, and all junior nurses would find that its simplicity would enhance their progress of study. It is well named and a good specimen of the publisher's ability.

DISEASES OF RECTUM, ANUS AND SIGMOID FLEXURE.—By Jos. M. Matthews, M.D., LL.D. New York: D. Appleton & Co., 1903.

The third revised edition of Matthews' Diseases of the Rectum is before us, and it seems as if the author is keeping this text book up to

its previous standard. The book contains 577 pages of reading text, and is designed and will be found serviceable for both students and practitioners. It is an excellent treatise of the author's extensive experience, being sufficiently illustrated to elaborate the methods and technique so familiar to the author. Much stress is laid upon the most practical, although all methods worthy of note are elaborated upon and most excellently expressed in every detail. The text not only shows the author's familiarity with the subject, but with various specialists' opinions on rectal conditions.

DUNGLISON'S ILLUSTRATED MEDICAL DICTIONARY.—New Twenty-third Edition. Thoroughly revised and re-edited by Thomas L. Stedman, A.M., M.D. In one magnificent imperial octavo volume of 1,220 pages, with 600 illustrations, including 85 full page plates, mostly in colors, with thumb index. Cloth, \$8; leather, \$9. Philadelphia: Lea Bros. & Co..

A review of this well known work seems hardly to be required; few, if any, doctors or students are unacquainted with the work, and its popularity is evidenced by this, the twenty-third edition, being called for. The workmanship on the outside shows it to be the best that can be procured by the publishers, while the inside has been thoroughly gone over, many words that have become obsolete have been dropped and newer ones substituted. The dose table has been left out, but the doses expressed in Troy and Metric system has been inserted, the derivation of the word, when from the Latin or Greek, is indicated, and throughout the work shows a careful and scholarly revision, and is to-day the standard work of its kind.

INFECTIOUS DISEASES.—By G. H. Rogers, Professor at the Faculty of Medicine, Paris. Authorized translation. By M. S. Gabriel, M.D., New York. In one handsome octavo volume of 800 pages, with 43 illustrations. Philadelphia: Lea Bros. & Co.

In the translation of Professor Rogers' great work Dr. Gabriel has given to the profession a work that every one should be proud of. The work stands in a field to itself, taking up the etiology, diagnosis and treatment of that class of diseases which above all others interest us most. It has certainly accomplished the desires of the author, viz.: to harmonize any seeming antagonism between experimental research and clinical observation, and to reduce the theories of infection and immunity to the basis of practical utility. The book should be in the

hands of every practitioner, and to the student of medicine and surgery it is indispensable.

PRACTICE OF MEDICINE.—Designed for use of Students. By James Magoffin French, M.D., Lecturer on Theory and Practice of Medicine, Medical College of Ohio; attending physician to St. Mary Hospital; consulting physician St. Francis Hospital for Incurables. Large 8vol., 800 pages. Illustrated by ten full page plates in black, colors and tints, and fifty wood engravings. Muslin, \$4 net; leather, \$4.75 net. Wm. Wood & Co.

In this work the author has divided the book into three divisions. The first one, being "Principles of Medicine," deals with pathological process constantly occurring in the study of disease. Part II—Practical Medicine. In this the author is to be congratulated on the arrangement of his subjects, putting each subject under a special heading, making the work read free, and by this method he has made it a ready reference book for both the practitioner and student. Part III takes up clinical diagnosis, and the text shows the work of a scholarly and painstaking author.

Medical Notes.

We are in receipt of the following communication, which thoroughly explains itself, and which we are pleased to publish :

REGARDING THE OWNERSHIP OF THE NAME VALENTINE.

To the Medical Profession :

GENTLEMEN—A concern styling itself the A. S. Valentine Chemical Company, recently sprung into existence, is advertising a preparation in the form of a capsule for which it claims scientific and wonderful value in the treatment of gonorrhea, its complications and sequelae.

Investigation shows that :

This A. S. Valentine Chemical Company is a company formed under the laws of the State of New Jersey, and that its incorporators are A. F. Evans, Frank L. Shelton and Nannie L. Shouse, all residents of Kansas City, Mo. This company has a small office at a pretentious address in New York City, which address it uses in its advertisements.

The alleged "literature" offered in these advertisements consists of some extraordinary assertions, contains no records of scientific investigation, no clinical reports, and no signatures of physicians.

The capsule they sell is a gelatine-coated thick fluid, bearing the name "Benzol-Capsule Valentine." The contents of the capsule have been represented as "distilled and encapsuled by Valentine's special process."

As is admitted by the person in charge of the office, who is one of the directors, no person by the name of Valentine has ever been connected with the A. S. Valentine Chemical Company, nor has any person with this surname given it his or her consent to the use of this name.

Whatever may have influenced this concern to select the name Valentine as a part of its corporate name, the fact that Valentine is my name, and that I by my writings have brought this name prominently before the medical profession in connection with the study and treatment of gonorrhea and kindred diseases, makes it incumbent upon me to prevent, as far as lies in my power, any deception of the profession and the public by the mis-use of my surname. It would be an injustice to my colleagues and to myself were I, by silence, to lend credence to the inference their advertising obviously suggests.

In order, therefore, to protect the profession, the laity and myself, I hereby beg to call attention to the following facts :

1. That I have, in all my writings on gonorrhea, its complications and sequelæ, emphatically expressed my conviction that no drug or combination of drugs administered internally can be a specific in the treatment of these diseases.

2. That no drug or combination of drugs given by the mouth can destroy gonococci.

3. That I do not know the contents of the capsules sold by these people, and that I certainly do not recommend them or any other secret preparation.

4. That neither I, nor any relative, nor any acquaintance of mine, is in any manner connected with the A. S. Valentine Chemical Company.

5. That on January 7, 1904, through my legal adviser, Henry C. Quinby, Esq., of this city, I formally requested the A. S. Valentine Chemical Company to desist from the use of the name Valentine, and upon their refusal I caused a petition for an injunction against their so doing to be prepared for filing in the Circuit Court of the United States.

On January 20th the counselor of the so-called Valentine Company had an interview with my legal adviser, Mr. Quinby, which resulted in the former unequivocally advising his clients to cease using the word Valentine in any manner whatever.

I will thank any of my colleagues to inform me of any violation of this promise, so that I may, for the sake of the public, the profession, and my own sake, prosecute as vigorously as the best possible counsel and any sum of money can.

Most respectfully,

FERL. C. VALENTINE, M.D.

NEW YORK.

RECEIVED sample of Ecthol, and have used same on a bad case of follicular tonsilitis, with a complete cure in twelve hours. This is certainly remarkable, and am very much pleased with it. At present am using it on a leg ulcer with remarkable results, and I can heartily recommend it to the profession.

H. B. HANNON, M.D.

CHICAGO, ILL.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

VOL. XXXVII. LOUISVILLE, KY., FEBRUARY 1, 1904. No. 141.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. —RUSKIN.

Original Articles.

SOME PHASES OF BRIGHT'S DISEASE.*

BY A. G. BLINCOE, A.M., M.D.

Of all diseases to which mankind is subject, probably no one of them appears under more different aspects than does Bright's Disease. It is not at all likely that any of us, even in the course of a long and large experience, has ever met with it in all the various phases which it may assume. It occurs to me, therefore, that if each of us here present would give a brief account of some of the interesting types of the disease which we have encountered we would in this way introduce a most useful and instructive subject for discussion, and it is principally with this object in view that I have ventured to present this short paper, which will simply consist of a brief mention of a few, to me, interesting cases, with some facts and remarks bearing on the subject.

CASE I.—One of my earliest cases came up as a sequel of scarlet fever in a white girl twelve years of age. I examined her urine every other day during convalescence, and after several tests found albumen. Soon afterwards nausea, headache and convulsions followed. (The latter, by the way, seemed to be controlled by hypodermics of morphine and pelocarpine.) This patient, after a relapse from going out too soon, finally made a good recovery.

CASE II.—Some years afterwards I was called to see a young white

*Read before the September meeting of the Nelson County Medical Society.

man, aged about twenty years, whose only subjective symptom was difficult breathing, the chief objective one being anasarca. Further examination revealed a scanty, very dark colored renal secretion, loaded with albumen. The trouble had come on soon after working about a saw-mill, he being most of the time standing or walking in water. He rapidly and fully recovered under rest in bed, warmth and purgatives. It seems strange that these two cases, having probably the same pathological condition of the kidneys, although from different causes, should present such different symptoms. While both may probably be called acute Bright's Disease, they had not a single symptom in common, so far as I noticed, excepting the albuminuria. The one had nausea, headache and convulsions, without dropsy; the other had dyspnea and dropsy, but no nausea, headache or convulsions.

CASE III.—A few years ago I was called to see a rather fleshy white woman, aged fifty-two years, who had been sick but a few days, but had been given up to die before I saw her. She was comatose, had a pulse of 160, respiration about 50, temperature 103 1-2°F. I learned that her kidneys had not acted for some time, and it was only after some urging that her friends allowed me to draw off her urine. There was a large quantity of it, but it was very dark colored, and I found on boiling some of it in an iron spoon over some live coals from the wood fire that it contained a large quantity of albumen. Had her condition been recognized sooner, and proper remedies applied, she might possibly have been saved, or at least her life prolonged.

CASE IV.—A few months after this I was called to see a white man about eighty years of age, who was apparently about to die from an obstruction of the larynx. This was the only symptom complained of at the time. I diagnosed his case odema of the glottis, and ordered a dose of salts, and let him inhale steam while I went to get an instrument with which to scarify the glottis, but on my return in about an hour or so found him breathing easier, and did not use it. Remembering that odema of the glottis is likely to occur in Bright's Disease, I got a sample of his urine and found it albuminous, and later developments confirmed the diagnosis of Bright's Disease. If correct in my diagnosis of odema of the glottis, it is, perhaps, the only case I have seen, and it seems to me a little remarkable that my first case should occur in one of his age.

CASE V.—A white man thirty-five years of age came into my office about two years ago, saying he had been unable to see well for some

two months past. The dimness of vision had come on rather suddenly, and was the only thing he complained of. I was unable to improve his sight with lenses, and called his case one of amblyopia, a condition of the eyes which has been described as one in which the patient does not see well, and the doctor does not see anything to account for it. I then inquired if he used whiskey or tobacco to excess, as these are said to be common causes of amblyopia, but as he said he did not use either of them at all, I obtained a sample of his urine and found it contained albumen, and concluded he had Bright's Disease. On further inquiry I learned that he urinated two or three times at night, and also that he suffered at times with nausea and vomiting in the mornings, all of which tended to confirm the diagnosis of Bright's Disease. I learned from one of our country papers that he died suddenly some months afterwards.

I saw a case in an elderly gentleman a year or so ago who had incontinence of urine, and another soon afterwards in a man of about the same age who had retention. Although this difference may in a measure be accounted for by the condition of the prostate gland, yet it seems a little singular that two cases of the same disease occurring in men of about the same age and condition in life should be affected so differently.

Osler reports a case that became suddenly maniacal and died in six days, and says that mania may come on abruptly in an individual who has shown no previous indications of mental trouble, and may not be known to have Bright's Disease. He further says that hemiplegia or local palsies are not uncommon, and that these cases may simulate almost every form of organic disease.

Reisman says: "Aphasia may occur in uremia, and is at times the whole expression of that state."

Now, it seems that while our text books enumerate quite a number of symptoms that may and often do occur in Bright's Disease, yet we may have cases showing but one or two or very few of these symptoms. It may even exist for some time in the chronic interstitial form without any subjective symptom at all. The case of Dr. Hawthorne, of New Orleans, with which, perhaps, you are familiar, is a notable example of a case of this kind. In these last mentioned cases, if albumen and tube casts should be temporarily absent, as they are said to be in some cases at times, there might possibly exist a nephritis with absolutely no symptom at all, either subjective or objective, indicative or n.

the disease does undoubtedly occur sometimes with very few or any marked symptoms pointing directly to it, and as we even sometimes fail in our first urinary tests to find albumen or other evidences of the disease when it does exist, we should not rest content, in suspicious cases at least, with one or two negative tests, but make several from time to time, keeping the patient in the meanwhile under proper dietetic and hygienic regime as a matter of precaution in case our fears should be realized by later developments.

“Osler emphasizes the fact that a trace of albumen and a few tube casts need not necessarily mean for a man of fifty a very serious prognosis, but may simply be a warning to alter the mode of life so as to conform to lessened power for digestion, work and elimination. More stress, he says, should be laid on persistent low specific gravity of the urine, arterio-sclerosis and hypertrophy of the heart and the presence of albumenuric retinitis. By warning the patient the discovery of albumen and tube casts may be a benefit instead of a disadvantage.” (“It should be borne in mind that Haines has shown that the tube casts can be found in small numbers in the urine of apparently normal individuals S.”)—*Chicago Year Book*, October, 1902, page 330.

Anders, in his “Oration on Medicine,” delivered at the last meeting of the American Medical Association, states that “according to the census for the decade ending May, 30, 1900, while the increase in population was only 50 per cent., certain types of chronic nephritis have arisen in frequency to nearly 200 per cent.”

Whether this apparent increase in this disease is due to an actual increased prevalence of it or to more accurate diagnosis in the last mentioned period it is impossible to say. Possibly it may be due to some extent to both causes. Another remarkable fact mentioned by Anders is that “in 275 autopsies from lobar pneumonia, which includes all the deaths from that disease occurring at the Philadelphia Hospital for a period of six years, from January 1, 1896, to March 1, 1903, renal lesions were recognized in 90.5 per cent. of the totality of cases.”

Because of its manifold phases, its increased prevalence of late, and its great liability to complicate or follow other diseases, it would seem that it behoves every judicious practitioner of medicine to be almost constantly on the lookout for this protean and oftentime insidious disease.

ADENOID ANESTHESIA.*

BY DR. HUGH N. LEAVELL.

This subject is one which is more particularly interesting to men who are practicing the specialty of diseases of the eye, ear, nose and throat. It is, however, necessary for them to employ a general practitioner who is in the habit of administering anesthesia for the operation or removal of adenoid growths. There has been a great deal written in the journals devoted to diseases of the eye, ear, nose and throat pro and con for the administration of an anesthetic in the removal of adenoids. Some text books on the subject go so far as to state that it is useless to administer a general anesthetic for the removal of adenoid tissue. But there can be no doubt that the administration of an anesthetic for this operation means that the operation will be more thorough, and therefore the results are satisfactory.

ENGLISH.

Lennon Browne gives patient or family the option of an anesthetic or not, but decidedly advises use of nitrous oxide, if necessary, continued by a little ether, strongly opposes chloroform.

Howell says an anesthetic should always be given—prefers generally the gas-ether-chloroform sequence, omitting the chloroform only when operation can be completed in two or three minutes.

Watson Williams—Anesthetic is desirable; prefers nitrous oxide, but if, as is often the case, longer anesthesia is required, use chloroform.

Barre prefers chloroform, but cough and swallowing reflexes should not be in entire abeyance.

MacDonald gives chloroform except in adults.

AMERICAN.

Coakley says patient is to be placed under general anesthesia, ether over six, chloroform under six years of age.

Grayson permits occasional exceptions to the rule of general anesthesia (age over six, temperament and tractability); generally gives ether just to the "point of complete insensibility to pain," laryngeal reflexes being preserved.

Birkett (Posey and Wright's system eye, ear, nose and throat) says operation for adenoid should always be undertaken with patient under an anesthetic; invariably prefers ether.

Roe (Deschweintz and Randall's system) says in children use of

* Essay read before the Louisville Medical Society, January 19, 1904.

general anesthetic is always advisable, unless there is some contra-indication to its use; finds chloroform or Schleick's mixture most satisfactory.

Bishop gives general anesthesia, and prefers ethyl-bromide.

Kyle says in children it is far better to give a general anesthesia; prefers chloroform to the oxygen.

Richards says almost invariably my own practice is to resort to general anesthesia, except in adults; invariably use ether.

Ingall's—In children chloroform or ether should be administered, chloroform being preferable.

Price-Brown—In infancy and childhood, my own impression is that an anesthetic should always be administered; says choice would seem to be between nitrous oxide and ethyl-bromide, but appears himself to use chloroform.

The selection of an anesthetic for this operation should be chloroform. Ether has a tendency to produce too much irritation around the throat, and is not as tranquil an anesthetic as chloroform. As this operation is usually done during the period of childhood, it is well to remember that children bear chloroform better than any other anesthetic, and it is a remarkable fact that the stage of excitement is hardly ever present in children under the age of puberty. That the removal of adenoid tissue is a painful procedure and productive of great harm to the nervous system in many cases is an argument of great prominence in favor of the administration of an anesthetic. It is not only the pain of the operation but the shock which brings about such results. When we take into consideration the fact that the child has to be held firmly while manipulations around the throat are carried on, which must of necessity be thorough in their character, it will be readily seen that the shock must be profound. No one will doubt that the appearance of an operation for the removal of adenoid tissues under chloroform is one of the most horrible pictures in surgery. A child with its head thrown back over the edge of the table, blood streaming from its mouth and nose, is indeed an unpleasant reminiscence. However, the surgeon is conscious of the fact that he is doing much better work than if the child were not under an anesthetic.

Before the administration of any anesthetic, certain preliminary precautions are advisable. First, the intestinal tract should have careful attention, and should be cleaned out at least twenty-four to thirty-six hours before the administration of the anesthetic. Of course, it is needless to say that nothing should be passed into the stomach for

six or eight hours before its administration. In order for an anesthetist to be thoroughly competent to administer the anesthetic for this operation, he should have had some experience either in witnessing the operation, or to have done the operation himself, the latter being more preferable. It is necessary for the anesthetist to remember that he must be an assistant to the operator, as by so doing he, in a measure, precludes the possibility of an accident. The accidents I may mention as having been arguments against the administration of an anesthetic for this operation are :

1. Aspiration of blood into the trachea and bronchial tubes, producing a pneumonia or bronchitis.
2. Irritation of the pneumogastric nerve, inhibiting cardiac and respiratory functions.

The first accident is to be obviated by allowing the patient's head to be well over the table and the anesthetist, while watching the operation, should tell the operator when to empty the mouth of accumulated blood.

The second is obviated by having the patient thoroughly under the anesthetic, but to a stage which I think should be described in the text books as "the adenoid stage." This is a stage of anesthesia beyond that at which excitement usually occurs and slightly under that of surgical anesthesia. This stage of anesthesia allows the child to cough, thus not abolishing the laryngeal reflexes and not entirely abolishing the conjunctival reflexes. It is a stage of anesthesia which requires some practice in order to acquire it.

The proper way to begin the administration is drop by drop until the patient loses muscular rigidity, but the conjunctival reflex still remaining. Just at this point the anesthetic is suddenly pushed for a short period and the patient is ready for the operator. The child is then brought over to the edge of the table, the head being steadied by the hand of the anesthetist, with his thumb resting on the mouth-gag, keeping it in place, and with his left hand on the radial pulse. Just as soon as the mouth fills with blood, the child is suddenly turned to its side, the blood drained out, and then placed in its previous position, and again the operator proceeds.

Occasionally it happens that there is a great deal of blood swallowed, which may at once provoke vomiting. This is a signal for the operator to stop and for the anesthetist to cautiously push his anesthesia until vomiting ceases, the child's head at the same time being kept in position ready for the resumption of the operation. If the vomiting should be

excessive, the child should be turned on its chest, with its head over the edge of the table, resting in the palm of the hand of the anesthetist, with his finger on the temporal pulse and with his other hand administering sufficient anesthesia to alleviate the vomiting.

It very often happens that it is necessary to remove the faucial tonsils at the time the adenoid tissue is removed. For this the patient is allowed to remain on his back, the head resting on the table. As this requires a very short period of time, and is practically a painless operation with the use of the tonsilotome, the primary stage of anesthesia can be taken advantage of, allowing a few minutes to elapse for the bleeding to cease before the anesthetist pulses his patient to the adenoid stage of anesthesia. It is hardly ever necessary to administer more than from one to three drachms of chloroform to complete this operation. When we take into consideration the slight amount of anesthetic necessary, the fact that children bear anesthesia well, and that with chloroform we have few chances of after effects, such as bronchitis or nephritis; and when we take into consideration also the alleviation of shock by the administration of an anesthetic, I believe it may be stated that for this operation on children under the age of puberty, the general anesthetic should be administered.

I have administered chloroform for this operation about two hundred times in the last ten years, and have yet to see any untoward results. I may say, however, that greater care is necessary on the part of the anesthetist for this operation than for any other in the whole domain of surgery. But if we recognize the importance of getting the patient to the stage of adenoid anesthesia, I feel safe in assuming that no deaths will be reported.

Selections.

(MEDICAL RESEARCH.)

THE GASTRO-ENTERIC TRACT.

The dignity of this subject is epitomized in the recent startling statement from Einhorn that there are no primary pathologic lesions of the gastric mucosa. Secretory disturbances alone are held accountable for all histologic changes, so that it behooves well the physiologist to clear the mooted questions on which all else depends.

The origin of succus gastricus, for example, is still unknown, although the views of Koeppe are no longer held hypothetically, physiologists are inclined to regard most of the chemical combinations—acids, bases and salts found here as food derivatives and not as secretory products. Hydrochloric acid is most probably not a secretion product, although it is conceded that it is produced through the agency of the peptic cells.

The stomach should be made no exception to the fact that every tissue in the body secretes proteid-digesting enzymes; it alone possesses the facility needed for their elaboration and adaptation, the rest of its complex contents are of extraneous origin. Be this understood, furthermore, to account in a measure for the fact that autodigestion is not a possibility. Delezenne's observation that fresh blood serum check enterokinase will bear quotation in this connection, for by themselves all living tissues, leucocytes, bacteria, venom, even, will destroy proteolytic ferments and render them inactive. That the stomach does not digest its walls is no more remarkable than that muscle or nerve tissues remain unaffected by enzymes as powerful as those produced by the peptic cells lying within their stroma.

The secretion of the proteolytic enzymes has received well merited attention. Many valuable suggestions have been made. Foremost among these is the work of Bayliss and Starling, who observed the fact that when infusions of the secreting mucosa of the stomach and intestines were injected into the circulation that there occurred an immediate augmentation in the secretion of the digestive juices. This could occur, they pointed out, in but one way, namely, that the gastroenteric mucosa must be possessed of some special substance which

is capable of actuating the outpouring of the digestive ferments. To this substance they gave the name "Prosecretine," and they traced its spontaneous appearance to the dynamic force of ingested food particles. Prosecretine is, then, secondarily, the source of "secretine," which by way of the blood current (Bayliss and Starling) or by way of reflex nervous mechanism (Popelsky) excites the outflow of enzymes.

Fleige believes that it acts only through stimulation of the pancreas. The real source of secretion is hardly settled, although an eminent French authority disclaims the possibility of any other origin than the intestinal mucosa; this, in truth, seems most plausible, for the following reasons: It does not come from food stuffs, since prosecretine is found in the fetal intestinal mucosa. It does not come from the stomach, since it is destroyed by the peptic ferments. Bile contains none of it, but in animals carrying biliary fistula the liver is found to be rich in it.

The second important note on this point is that of Doyen, who finds that injections of peptone produced a decided outflow of bile; and the observations of Gley and Roux, with whom peptone administered hypodermatically was found to have the power of setting up physiologic contraction-waves of the stomach and intestine.

A third suggestion is that of Simnitsky, who finds that if bile is retained in the body that it will produce a violent hyperacidity in the stomach. This view is amply supported by the observations of Riedel who claims that 97 per cent. of gastralgic cases are associated with gall stones, and that by Kaufmann, who considers hyperacidity a most frequent accompaniment of the formation and existence of gall stones.

Another matter of growing interest are the cytotoxins, *i. e.*, those substances possessed by the chief tissue groups, and, notably, by the digestive tissues, which will destroy like tissue except where individual immunity obtains. Flexner's hemorrhagin exemplifies the group—a substance derived from the endothelium of the capillaries capable of dissolving them in another animal.

Gastrotoxin (Babes and Theohari) has recently been isolated, and is found to produce, when injected into animals, violent hemorrhages of the gastric mucosa. This simple statement suggests the necessity for further research into the antitoxic protective internal secretions of the digestive cells, and a further elaboration of their cytolytins.

The mechanics of digestion have received much attention, chiefly through the use of the radioscope. The experiments have been conducted variously, different dense bodies being incorporated with

foodstuffs, so that the passage of these could be more carefully watched. Lommel used bismuth with good purpose; the results of his work lie chiefly in the fact that he observed the completely inhibiting effect of the emotions on gastric and intestinal peristalsis. In the healthy animal, the stomach can be made to remain absolutely inactive for two and three hours under the influence of fear or anger, after the ingestion of food. He found, furthermore, a distinct periodicity between the emptying of the stomach and the peristaltic movements of the intestines.

Sicard and Infroit made similar tests, using a capsule of bismuth covered thickly with collodion. They found that the time required for its passage from mouth to cecum was eight hours, and that in the small intestine its average speed was 25 centimeters in 15 minutes. After remaining in the cecum for four or five hours it ascended the great colon, averaging from two to four hours for each segment. It remained in the sigmoid flexure for a period of from twenty to twenty-four hours.—*Courier of Medicine*.

HOW TO TREAT A COMMON COLD SUCCESSFULLY.

BY C. R. MARSHALL, M.D.

To be able to treat successfully an acute rhinitis, that is to treat it intelligently and in such a way as to cut short the attack and relieve the patient's suffering, is an accomplishment that the young practitioner should assiduously cultivate. Too often the request for "something for a cold" is given but scant attention, and the patient concludes, with Burns, that

"When fevers burn, or ague freezes,
Rheumatics gnaw or cholic squeezes,
Our neighbor's sympathy may ease us
With pitying moan."

Success in the treatment of minor ailments has been the foundation of many a medical reputation. Furthermore, the chances are that the young practitioner will see ten cases of trivial nature to one of serious import during the first year or two of his professional career. With these thoughts in mind, the writer presumes to offer a few practical suggestions upon the treatment of acute rhinitis, or a common "cold in the head."

This extremely disagreeable affection should be taken in hand as

soon as recognized. The first symptoms, in the great majority of cases, are sneezing and a serous discharge from one or both nostrils. Occasionally a case will be encountered in which objective symptoms are wanting, and instead the subjective symptom of soreness and discomfort in the post-nasal region will be described by the patient. In either event the treatment is about the same in my experience. The first therapeutic measure to have attention is the promotion of the hepatic and other glandular secretions. This is accomplished by the administration every two hours, until three have been taken, of a chocolate coated tablet having the following composition :

℞ Hydrargyri chloridi mitis, gr. 1-5;
 Pulv. ipecacuanhae, gr. 1-10;
 Sodii bicarbonatis, gr. j.

Two hours after administration of the last tablet a full dose of sodium phosphate is given, my preference being for a granular effervescent preparation, which is very easily taken, even by children ; in fact, it is about the only purgative " saline " that children will take.

The treatment of the rhinitis includes internal and topical medication. Internal I prescribe, to be taken every hour, a chocolate coated tablet composed as follows :

℞ Camphora, gr. ss;
 Ext. Aconiti radicis, gr. 1-10;
 Pulvi opii, gr. 1-10;
 Ammonium chloridi, gr. ss;
 Quinine sulphatis, gr. ss;
 Ext. belladonna foliorum, gr. 1-20.

This tablet alone will reduce secretion, allay post-nasal irritation, and in many cases be all that is necessary to completely check the progress of a very annoying and distressing cold. In more obstinate cases, especially those attended with occlusion of the nares, the application of a 1-5000 solution of adrenalin chloride will be necessary, and will afford much relief and hasten resolution. This solution is prepared by adding thirty minims of the 1-1000 solution, supplied by Messrs. Parke, Davis & Co., to two fluidrachms of normal salt solution. It is applied by means of an atomizer, or with the cotton applicator. With these measures rigorously prosecuted, the treatment of a cold becomes a simple matter, and the results will prove not only most agreeable to the patient, but profitable to the physician.

To recapitulate: The treatment of an attack of acute rhinitis includes :

General Treatment—Stimulation of hepatic and other secretions by administration of calomel, ipecac and sodium bicarbonate, followed by sodium phosphate.

Specific Treatment (Constitutional)—Internal administration of the camphor, aconite and opium combination to check nasal discharge.

Specific Treatment (Local)—Topical application of solution adrenalin chloride 1-5000 or 1-10000, to allay inflammation, reduce tumefaction and check exudation of serum.—*Carolina Medical Journal*.

—Progress—
of
Medical and Surgical Science.

Dietetic Treatment in Infantile Autumnal Diarrhea.—The difficulties which beset the practitioner in his endeavors to secure a suitable form of diet for a disease in which practical starvation (in spite of its evil after consequences) has so far offered the best chance for success bid fair to be largely mitigated in the light of knowledge afforded by the favorable results obtained by Dr. Baginsky, Professor of Diseases of Children in the University of Berlin, in the employment of buttermilk. According to him (*vide the Sanitarian*), the best method of preparing it is by inducing lactic acid fermentation in pure cream, and then adding wheat flour and cane sugar in the proportion, respectively, of 15 to 25 grammes and 35 to 50 grains per litre, the mixture being boiled, with constant stirring for about two minutes, and then cooled in sterilized bottles for use. It would appear that a sickly child of eight weeks can tolerate about 600 grammes daily, and one of thirty double that quantity. The effect is at first apparent in the altered character of the stools, which become pasty and lose their offensive odor, and later in the improved general appearance of the infant, which is followed by a steady gain in weight. Besides employing the agent in diseased conditions, he advocates its employment in the case of healthy infants in preference to other forms of artificial feeding as a substitute for mother's milk.—*Treatment.*

The Dangers of the Trendelenberg Position.—Kraske (*Centralbl. f. chir.*, Leipzig, 1903, No. 36) draws attention to certain risks attending the employment of the Trendelenberg position in abdominal and pelvic surgery, particularly in myocarditis, where the hydrostatic pressure of the blood may occasion irreparable dilatation of the feeble heart. He has also seen intestinal obstruction follow operations performed in this position in two cases. Kummell, in discussing this communication, expressed doubt as to the connection between the position and the subsequent obstruction, although Trendelenberg himself admitted the possibility. Another sequel mentioned in post-operative hematemesis, which Kraske believes may be due to pressure of the abdominal

contents on the portal vein, causing venous congestion of the gastric mucous membrane. Von Eiselsberg has also observed hematemesis under similar circumstances. All seem agreed that the position should not be maintained longer than is absolutely necessary.—*Edinburgh Medical Journal*.

Temperature in Its Relation to Shock.—Kinnaman (*Annals of Surgery*, Philadelphia, December, 1903) has conducted an elaborate investigation into temperature relationship existing in shock. His conclusions are that shock must not be considered as due to the lowering or exhaustion of one bodily function, but as a composite condition embracing a lowering of the blood pressure, a lowering of the respiratory act, and a marked fall in the body temperature. As shock increases in severity, the most uniform and progressive factor is the fall in temperature. In some experiments the fall in temperature was the sole cause of shock. If the temperature is maintained the respiratory rate may be increased instead of diminished, and the fall in blood pressure is greatly lessened. By raising the temperature (previously lowered by shock), the respiratory rate is increased and the blood pressure raised. The author, therefore, looks upon lowering of the temperature as a most important factor in causing shock, and as a prominent feature of the condition.—*Edinburgh Medical Journal*.

The Use of Apomorphine.—Graduates in medicine of twenty-five years ago are wont to consider apomorphine solely from the standpoint of a centric emetic, but as a matter of fact this drug was not before the attention of practitioners many years before it was employed with excellent results as a sedative expectorant in the early stages of bronchitis, when it was desired to aid in secretion, and when the physician was anxious to diminish excessive cough and irritability of the respiratory mucous membrane. Within the last two or three years several papers have appeared, in which practitioners of experience have recommended the employment of apomorphine in the treatment of acute alcoholism. They claim that the drug not only diminishes the desire for alcohol, but also acts as a nervous sedative, preventing the development of delirium tremens upon the withdrawal of the stimulant. They have also asserted that it does not generate a desire for hypnotics as does the use of morphine. It may be remembered that Douglass, of Boston, first employed this remedy to a considerable extent in the treatment of alcoholism, and stated that it relieved insomnia and diminished alcoholic craving. The alcohol is withdrawn

from the patient gradually, care being taken at the same time that he is nourished with easily digested or predigested foods.

We now have before us a paper by Bechet, which appears in the November number of the *New Orleans Medical and Surgical Journal*. Bechet has employed apomorphine with, he claims, excellent results. He thinks that under some circumstances apomorphine acts a circulatory depressant, and so he has always administered with it one-thirtieth of a grain of strychnine hypodermically. His method of administration consists in giving one-thirtieth of a grain of strychnine and one-thirtieth of a grain of apomorphine by means of the hypodermic needle, as frequently as every three hours. Rarely does this dose in his experience produce nausea and vomiting. In some instances he has found it necessary to employ as much as one-fiftieth of a grain. —*The Therapeutic Gazette*, January 15.

Removal of the Tonsils as a Preventive of Disease.—Increasing experience proves beyond all doubt that a considerable number of infections take place through the tonsil. Of these perhaps the most frequent is acute articular rheumatism, but it is a well known fact that other diseases, depending upon micro-organisms for their existence, begin in the body after their germs have entered through the tonsillar tissue. Several years ago the late Dr. Frederick A. Packard published a paper of a clinical character in which he brought forward convincing evidence of these facts, and physicians should at the present time regard diseased or enlarged tonsils as a constant menace to the health of their possessor. In the *American Journal of the Medical Sciences* for November, 1903, Koplik, of New York, publishes a paper in which he points out that tuberculosis of the tonsils may occur, and that frequently the tonsils may act as a portal for tubercular infection. Primary tuberculosis of the tonsil is of course a very rare condition, but the bacillus tuberculosis, and the results of its presence, can often be found in the tonsils of tubercular patients, and even in the tonsils of those who may not be known to be tubercular. How frequently do practitioners of experience meet with children suffering with large cervical glands which in modern view are mostly tubercular in origin, and which are due in the majority of instances to the entrance of the tubercle bacillus through the respiratory, buccal, or tonsillar mucous membrane. And how frequently do we see children who have chronic hypertrophy of the tonsils, suffer from diphtheria, from ulcerated throat in scarlet fever, and from nasopharyngeal obstruction, which in the course of

respiratory diseases often seriously interferes with their taking of sufficient air and nourishment.—*The Therapeutic Gazette*, January 15.

Syphilis and Marriage.—Except in rare cases, according to Marshall's study of the statistics of Tamowski, Fournier and others (quoted in *Treatment*, August, 1903), syphilis is only a temporary cause of prohibition of marriage.

Three or four years after the onset is the time given by Fournier as the minimum time before marriage can be sanctioned. Hutchinson gives two years.

The absence of lesions requires little comment, but Cullerier has reported cases to show that the fetus can escape infection even if the father is in a contagious state.

Relapsing erosions of the mouth and penis are especially dangerous. The first pregnancies are abortions; later ones end in the birth of syphilitic children; after a time healthy children are born. Exception has been made to this universal law of Diday, owing to the fact that a syphilitic child is sometimes born after a healthy pregnancy; but here may be the possibility of another father.

The period of immunity since the last sign of syphilis should coincide with the suspension of treatment. This, according to Fournier, should be from one and a half to two years, during which time no treatment has been given.

In severe cases the time of probation should be prolonged. On the other hand, it is a mistake to relax the other rules because of the mild character of the disease, for it is well known that cases originally benign may be followed by severe later symptoms. Fournier's analysis of 84 cases of locomotor ataxia shows this well, no less than 74 cases occurring after benign syphilis, but such results are probably due to insufficient treatment.

Treatment by the intermittent method is advised by Fournier for three or four years. Chronic disease, he argues, should be dealt with by chronic treatment.

If signs of syphilis appear after marriage, the lesions should be cauterized with acid nitrate of mercury. A severe mercurial treatment should also be undertaken. Pregnancy should be avoided.

If the wife is pregnant, but shows no signs of syphilis, the course to adopt is a matter of opinion. If she has had previous abortions, mercurial treatment should be given. If it is a case of first pregnancy, the course of action depends on the age and quality of the disease of

the husband and on the treatment he has undergone.

The condition being bad in the husband, mercury should be given to the wife in small doses.

If the wife is contaminated and pregnant, treatment of the mother often prevents abortion, and may lead to the birth of a healthy child. Fournier is of the opinion that there is no evidence that mercury, given in moderate doses, ever causes abortion.—*The Therapeutic Gazette*, January 15.

Local Anesthesia.—(*Annals of Surgery*, December, 1903, Vol. 38, No. 6). By F. Gregory Connell, Leadville, Colo., Surgeon to St. Vincent's Hospital.

Local anesthesia is generally accomplished by freezing the tissues, or injecting into them cocaine, or some analogous preparation.

The freezing can be accomplished by ice and salt, or better, by spraying the parts with ethyl chloride, which is put up in glass or metal tubes, with screw caps or cock stops to allow the outflow of fluid, which is easily produced by the warmth of the hands on the tubes. The fluid, being of low boiling point and always under pressure, and as the result of this it sprays out easily when the cap is removed and the tube grasped in the hand. By the rapid evaporation anesthesia will be produced in less than a minute, and may be continued for a length of time by the application of the spray to the deeper tissues.

It is usually unsatisfactory, for the reason that in doing operative work where a dissection is needed, the tissues are very difficult to recognize and to manipulate. While in the opening of boils and abscesses the pain incident to the incision is slight as compared to the burning pain caused by the freezing and thawing out of the structures.

The most common form of local anesthesia is by cocaine or some of its succedania, the chief reason for so many preparations being the danger of systemic poisoning, the first symptoms of which are vertigo, nausea and vomiting, the heart and breathing often becoming very irregular. In order to obviate these dangerous symptoms, the limb can be constricted where the injection is to be made, and the addition of adrenalin chloride to the solution, and the dose to not exceed one-fourth grain of cocaine at one sitting.

Local anesthesia's are divided into three classes :

1. Direct anesthesia.
2. Infiltration anesthesia.

3. Regional anesthesia.

The first acting directly, chemically on the nerve ending of the region, the per cent. of solution so used should be when applied to the mucous membrane from 2 to 10 per cent., and for injections under the skin from 1 to 5 per cent. The second marks a great improvement in the administration of local anesthetics, being intra instead of hypodermal and the use of a very dilute solution, or the use of even plain water, and depends for its effect upon stasis, aschemia in the blood vessels and pressure upon the terminal nerve filaments, and the low temperature of the solution used. This is, perhaps, the safest known way for the use of local anesthetics, and was given to the profession by Schleich.

The different solutions used are as follows :

No. 1.		No. 2.		No. 3.	
Cocaine muriate, grains	4	Cocaine muriate, grains	2	Cocaine muriate, grains	1
Morphine muriate "	$\frac{1}{2}$	Morphine muriate "	$\frac{1}{2}$	Morphine muriate "	$\frac{1}{2}$
Sodium chlor. "	4	Sodium chlor. "	4	Sodium Chlor. "	4
Aqua dist., drachm	4	Aqua dist., drachm	4	Aqua dist., drachms	4

The second solution is the one ordinarily used, and from which many modifications can be made, the third solution is only required when large amounts are to be used. Adrenalin Chloride should be used in every solution for two chief reasons, as a cardiac stimulant and to overcome the depressing effects of cocaine ; also to get its hemostatic action, which will last for two hours or more, and which in no way favors secondary hemorrhage. Any solution used, in order to produce no pain, must be isotonic,—that is, having the same specific gravity and the same freezing point as the tissues into which they are used ; otherwise, the cells will either swell or give up their water to the solution, which in either case will produce pain.

Regional anesthesia is produced by injecting from a 1 to 3 per cent. solution in the sensory nerve that supplies the field of the operation at a point between the central nervous system and the point of interference, or they may be injected at the site of the wound. The injection to be made, if possible, into the nerve itself, if not into the perineural tissue. This causes the so-called blocking of the nerve system, and prevents centripetal impulses from reaching the center, and in this way prevents the chief cause of shock, it being often used in conjunction with a general anesthesia during an amputation to prevent the shock from wounding large nerves.

The application of infiltration and regional anesthesia has been growing very rapidly during the last few years, and has gained a very

important position among the subjects of anesthesia, while it has waged war against the fear of the patient that he is going to be hurt, and the statement of a few that the patients are apt to suffer from nervous prostration after extensive operations under its use. These objections, the first of which can be easily overcome by instilling into your patient confidence, and the second likening proof.

The advantage derived from it, is first and foremost of all: (1) Removal of danger of death on the table; (2) avoidance of the effect of a general anesthesia on the heart, lungs, liver and kidneys; (3) no period of post-operative nausea and vomiting, or unconsciousness; (4) no danger of the patient being drowned in fecal vomitus; (5) patient being conscious is able to assist the operator in various ways; (6) reducing by one the number of assistants.

The promiscuous use of local anesthetics is not to be urged, but the fact that they are safe, practical and better in many cases than a general one can not be disputed.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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Editorial.

THE VALUE OF CLIMATIC CHANGES IN PREVENTING DISEASES AND IN MITIGATING CERTAIN DISEASES.

We do not believe that the profession, as a whole, appreciate the value of climate in the treatment and prevention of diseases. There can be no doubt but that pulmonary diseases of all kinds are less frequent in the warm climates than in the rigid cold climate of the North, East and West, and to that end the old man is much less liable to an attack of pneumonia in any warm climate in winter than in a cold one. It should not be forgotten that high temperature and sunshine are sworn enemies of la grippe. Again, the daily out-door exercise in bright sunshine dispels many aches and pains, and brings refreshing sleep at night, which, after all, is the most essential thing.

The Southern and East Coast railways permeate all portions of the South, and with cheap transportation almost every one can obtain the benefit of climatic change.

In the January 15th issue Dr. T. P. Satterwhite presents with much force the need for a better management of the insane in asylums. Upon this subject we know of no one more prepared to speak.

It is only within the past few years that the medical profession has come to realize that insanity is a disease with a symptom complex, and that these poor sufferers are not the mere "*victims of diabolic possessions.*" When the bulk of the profession recognizes this, then will these unfortunates receive proper care.

It is clear that the acutely insane, with proper care in the beginning of his sickness, will in a large proportion of cases recover. It is manifestly plain, then, that this class of cases when first seen should be detained in a detention ward under the care of a skilled neurologist, with the help of kind and trained attendants. When so treated statistics show that 50 per cent. will recover, and the unfortunates temporarily bereft of reason will be delivered to their families restored.

Dr. Satterwhite, from the most convincing data, has shown that those hopeless cases who spend their lives in an asylum, that their care may be made easier by a system of work helpful to the general welfare, as well as a source of revenue to the State. But this can not be attained until the State recognizes the baneful influence of politics in asylum management, and asylums are entrusted to the care of a scientific head. As it is now, asylum appointments, from its head to its most menial position, depends upon political favor; therefore we will continue to hear of cruelties to the poor unfortunate as long as he is entrusted to the care of ignorant attendants. Dr. Satterwhite aptly concludes his remarks with the following advice:

"First of all, there must be a competent head to the institution and efficient assistant physicians. They must be men of character and men of ability, men of energy and conscientious desire to aid those unfortunate people committed to their care. Psychology is the most difficult of all subjects to master; therefore it acquires men who desire to make insanity a specialty, and these men should be given all the facilities necessary to become well versed in this intricate study. An annual report should be required of them as to their work, which should be exchanged for similar reports of other institutions. This would, in course of time, develop information that would be of inestimable value. As it is now, with the exception of a few institutions, all this valuable material is allowed to go to waste. It is lamentable to state, but nevertheless true, that most of these institutions are so many political machines; the positions in them are given as

political rewards rather than on account of competency. The object for which these institutions were built appears to be lost sight of, the patients are secondary considerations. When newspapers publish in conspicuous head lines the cruelties inflicted on insane patients at asylums and give the name of reputable persons who witness the acts, when the commissioners investigate such reports they are condemned by politicians, is it any wonder that cruelties occur and investigations are suppressed? The attendant is the most important selection of all asylum help, and great responsibility rests upon the superintendent in this regard. Competent persons, as a rule, can not be secured at the compensation given.

“Attendants at an insane asylum should have qualifications different from the ordinary trained nurse, as their duties are so very different. Every asylum should have systematic lectures given the attendants by the medical staff, and train them in the management of the insane. The attendants should have incentives to perform their duties other than their little monthly pay. They should be given, after a specified time of satisfactory service, an increase of wages. Furthermore, a handsome certificate should be given any attendant when he or she leaves the institution after a three years' term, and their daily record report showed they were entitled to it. This certificate I consider of great importance, and will be the greatest incentive of all, as it would secure employment in similar institutions without difficulty. Physicians should daily examine the more rational patients (and they are not a few) as to any undue restraint or harshness practiced on the patients. Let the commissioners who are required by law to visit the wards also examine them as to undue restraint. If this was practiced, what an impression on the patients in convincing them of the interest taken in them. The result would be that they would have less fear and hesitancy in speaking out and telling what they know, and those who have them in charge would be deterred from giving way to their impatience and temper. Cruel treatment is on the male side of the institution, and the most efficient means of preventing improper treatment is to have female attendants assisted by orderlies. We all know the calming influence of women in a sick room. Their gentleness and persuasiveness is what most patients require. It is exceedingly rare that an insane patient can not be managed by kindness. This system is in vogue in a few institutions, and the reports are so satisfactory that it is amazing that it is not more generally adopted. The only reason that it is not is that it is much

more expensive. No orderly would dare handle patients roughly in the presence of women. It is harshness that arouses the belligerency of the insane. Every physician should reckon this subject as a sacred duty, and properly inform their friends and the public in regard to asylum matters.

“It certainly seems only simple justice that medical science shall not longer be cheated of knowledge to be gained by scientific investigation, and it has a right for humanity’s sake to demand that medical science be allowed to glean all the knowledge that careful study will acquire, and permit the world to profit by the opportunity to gain valuable facts that are now so prodigally wasted.”

CORRECTION.—An error in the title of Dr. T. P. Satterwhite’s paper in last issue that should read cruelties and not casualties.

Book Reviews.

MANUAL OF THE DISEASES OF THE EYE. For Students and General Practitioners. By Chas. H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York; Ophthalmic Surgeon to the French Hospital, New York; Consulting Ophthalmologist to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to the Mt. Sinai Hospital, New York. Third revised edition, with 275 original illustrations, including 16 plates, with 36 colored figures. New York: William Wood & Co., 1903.

We have not seen a manual of the diseases of the eye the peer of this excellent little volume. Students will waste no time studying it, nor will the general practitioner be sorry of its ownership, its different parts being easily referred to. Although brief and to the point, the commoner eye troubles are fully stated and considered. There is a wise omission of excessive detail and rare conditions. Its large and rapid sale proves its acceptability to the profession, and its comprehensiveness and moderate price will insure its further sale.

It is neatly bound and well printed.

REFRACTION AND MOTILITY OF THE EYE. For Students and Practitioners. By William Norwood Suter, M.D., Assistant Surgeon to the Episcopal Eye, Ear, Nose and Throat Hospital, Washington, D. C. Illustrated with 101 engravings in the text, and four plates in colors and monochrome. Philadelphia and New York: Lea Bros. & Co., 1903.

Refraction and Motility of the Eye we find to be a most excellent work, decidedly well named and filling a much needed want. It is designed for the use of students and practitioners, and fulfilling their needs admirably, has gone further and is found to be almost indispensable to the up-to-date manufacturing optician. Although much smaller than other works similarly designed, it thoroughly covers its text and in a comprehensible manner. The student that fears a missing link in his knowledge of the eye as regards such departments of physics as optics and light will find this little volume indispensable, and in it many obscure points made clear. Should the theory of refraction at least be mastered, as elaborated in this book, the reader will be compensated for his efforts.

The work contains 380 pages of text, of which 129 pages are

devoted to the theory of refraction, 43 pages to the consideration of the normal eye, 138 pages to errors of refraction and 70 pages to motility.

The illustrations are good, the type clear, it is neatly bound, and an excellent example of the bookmaker's art.

THE PRINCIPLES AND PRACTICE OF HYDROTHERAPY ; A GUIDE TO THE APPLICATION OF WATER IN DISEASE FOR STUDENTS AND PRACTITIONERS OF MEDICINE.—By Simon Baruch, M.D., Professor of Hydrotherapeutics in New York Post Graduate Medical School and Hospital; Visiting Physician to the J. Hood Wright Memorial (formerly Manhattan General) Hospital; Consulting Physician to the Montefiore Home for Chronic Invalids; Member of the New York Academy of Medicine; formerly Gynecologist to the Northeastern Dispensary of New York City; Physician and Surgeon to the New York Juvenile Asylum, and Chief of the Medical Staff of the Montefiore Home for Chronic Invalids. Second edition, revised and enlarged with numerous illustrations. New York: Wm. Wood & Co., 1903.

Water; an agent whose therapeutic value was recognized by Hippocrates and his followers, and who have made efforts to place it before the profession as a remedial agent, but owing to prejudice instilled by quackery its progress has been thwarted, and it is to Dr. Baruch that we are indebted for the masterly manner in which he has attempted to call the profession's attention to the various methods of applying water in disease.

He claims no antiseptic properties nor antitoxic virtues for water, but scientifically demonstrates how nature is aided in its battle against the manifestation of toxemia by improving cardiac action, vivifying the nervous system and furthering the oxidation and elimination of toxic products.

He teaches that cold water is a therapeutic agent by whose correct application we can most surely and without danger of reaction exercise and invigorate the nervous system; that, too, cold water stimulates a relaxed or atonic organ or structure, and that in a tonic or spasmodic state hot water is our ideal relaxant, and that where thermogenesis is in power thermolysis is hastened by the water bath.

Hydrotherapy in typhoid fever has in a practical manner demonstrated to us that in pyrexia, with restlessness, a tepid or cold bath not only reduces fever, but quiets and acts as a soporific without any secondary depressing effects.

Knowledge of the correct uses of water in disease should become

the property of every medical man, and Dr. Baruch would have us justly realize that the application of water in disease is the most orthodox therapeutic measure in medicine, taught by the most eminent and judicial men who have illuminated medical history, and that, therefore, hydrotherapy deserves to be liberated from the absurd and undeserved stigma of relationship with empiricism.

The type is neat and distinct, the book is nicely bound.

BOOKS RECEIVED.

HOWE'S HANDWORK OF PARLIAMENTARY USAGE. New York: Hinds & Noble, 1903.

INFANT FEEDING.—By Louis Fisher, M.D. Third edition. Philadelphia: F. A. Davis Co. publishers, 1904.

YEAR BOOK OF SURGERY.—By Murphy. Received February 1st.

INTERNATIONAL CLINICS.—A Quarterly of Illustrated Clinical Lectures. Edited by A. O. J. Kelly, A.M., M.D. Philadelphia: J. B. Lippincott Co., 1904.

THE WORTH OF WORDS.—By Raley Husted Bell, M.D. New York: Hinds & Noble.

MORROW ON SOCIAL DISEASES.—By Prince A. Morrow, A.M., M.D. New York and Philadelphia: Lea Bros. & Co., publishers, 1904. Cloth, \$3 net.

Society Proceedings.

NEW YORK ACADEMY OF MEDICINE, SECTION ON ORTHOPEDIC SURGERY, MEETING OF JANUARY 15 1904.

DR. HOMER GIBNEY, CHAIRMAN.

Dr. W. R. Townsend presented a case of osteitis of the left hip and of left fourth metacarpal bone in a boy who was first seen on December 19, 1902, at the Hospital for Ruptured and Crippled. The hip has been under treatment ever since, and is getting along nicely. One year ago a swelling appeared on the hand, disappearing after rest. No syphilitic history can be made out. Within the last few weeks the swelling has returned. An X-ray picture was taken three weeks ago, showing that the entire fourth metacarpal bone is involved, and that the disease is confined to that bone. In such a case the entire bone should be removed to prevent spreading of the disease rather than to wait and let it progress and extend to the other bones of the hand.

Dr. Townsend presented another case—typhoid spine. A boy aged fourteen was seen at the Ruptured and Crippled Hospital November 23, 1903. Eight weeks prior to that time he had typhoid fever, which lasted four weeks. At the end of the typhoid fever he was in fair physical condition. One week after the typhoid he developed pain and stiffness in the back, which increased until, when he came to the hospital, he was bent over very much, suggesting a case of Pott's Disease. The pain was not localized, but extended up and down the spine. He had no pain in any other region.

The patient's physical condition has materially improved since he began wearing a plaster jacket, and he now feels so well he is anxious to get it off.

Dr. Townsend then said he would like to present very briefly the history of two other cases of typhoid spine which he had treated within the last year. The first case was a girl of eleven, who, after typhoid, began to complain of pain in the spine, especially about the lumbar region. No kyphosis, no deformity whatever, but the entire spine was very stiff. The girl was markedly neurotic. The question was, whether it was a typhoid spine or a neurosis. The previous history of typhoid inclined the speaker to that diagnosis, of the type

to which Osler refers—a neurosis. Dr. V. P. Gibney, who also saw the case, agreed in the diagnosis. Under a brace she made a good recovery.

Another case was seen with Dr. F. P. Jackson. A man thirty-nine years of age was seen November 2, 1903. Typhoid attack began July 13th; ended August 9th. Ten days after the typhoid he was in the Adirondacks recuperating, when he was seized with sever pain in the spine. His pain was so severe he was moved with the greatest difficulty. Even the attempt to move him from side to side caused the most excruciating pain. He was not neurotic. His face indicated that he suffered intensely. No one vertebra was more prominent than the others; no one spot more painful than another. He complained of pains over the entire lumbar region. A brace was applied, but was kept on only a few moments, as it seemed to increase the discomfort produced by lying on his back. Codein was given in the hope of quieting the pain, and finally hypodermics of morphine were resorted to, and after a week the brace was reapplied and kept on. There was persistent pain over the pelvis on both sides between the hip joint and the anterior superior spines. Nothing was ever found to account for it. These pains continued for three weeks or more, and persisted after pain in the spine had ceased. No disease of the hip joint was ever made out, no abscess, neuritis, or anything except that he insisted on the fact that he had intense pain there. Under the use of the brace and rest in bed for six weeks, he entirely recovered, and goes to Palm Beach to-morrow.

The man now walks about the house, but is very thin and feeble. Does not require a cane or any assistance in walking, and has some beginning spinal nobility.

DISCUSSING ON DR. TOWNSEND'S CASES.

Dr. T. Halsted Myers said he thought the typhoid spine case showed two characteristic points, the extreme pain in these cases. He had, this fall, been obliged to chloroform a patient in order to put on a plaster jacket, and chloroform him again to take it off and replace the plaster.

The second point was the prompt recovery, often in one or two months.

Dr. Homer Gibney said he had seen a recent case of typhoid spine in which all the symptoms were referable to the cervical spine. Dr. Whitman had applied a short jacket with jury mast or chin support

which elevated the chin, and that this case made an uninterrupted recovery. He had seen a number of cases in which the pain had been intense respond rapidly to cautery and fixation.

Dr. R. Sayre said he had not seen many cases of typhoid spine, but had seen a certain number of them, and had at present a case of scarlatinal spine under observation. The patient, a boy, had been well until he had a severe attack of scarlet fever some three or four years ago. Following that he had nephritis, which lasted for a number of months. Then he had what was supposed to be rheumatism in various parts of the body, finally located in the back. When seen by Dr. Sayre, it was discovered that he had large intra-abdominal abscesses, and a slight kyphos. All of these apparently dated from his scarlet fever. Abscesses subsequently opened in one iliac fossa and in the opposite thigh.

Dr. Sayre presented a case of congenital deformity of the neck resembling torticollis. Has a certain amount of pain in her neck, which runs down toward her arms. Mother thinks deformity has increased somewhat. Examination of the case extremely difficult by X-ray as the ear is drawn so close to the shoulder as to make it hard to insert the plate. The plates made are not very satisfactory. When the child's head is well bent to one side, one feels some very hard, solid substance down in the neck, which is either a very long transverse process or else possibly some supernumerary ribs. The distance is very much shorter than it should be between the ears and neck, and the X-ray shows that the upper vertebrae have coalesced.

Dr. J. R. Hunt said he would like to ask how Dr. Sayre excluded an extreme degree of congenital torticollis. The right sterno-cleido-mastoid muscle was practically atrophied, represented only by a tendinous cord. The other muscles of the right cervical region were also tense. There was an extreme asymmetry of the face, so often an accompaniment of this condition.

Curvature of the spine and rotation of the cervical vertebra would be a natural and inevitable result. Furthermore, the skiagrams demonstrated the absence of cervical ribs.

The long prominences palpable in the side of the neck would be sufficiently accounted for by sub-luxation and rotation of the vertebrae, allowing an abnormal projection of the transverse processes.

Dr. R. Whitman said that he had seen a case recently very similar to that shown by Dr. Sayre, particularly the same short, thick neck,

with the growth of hair in the median line; the torticollis was less marked.

He would suggest as an explanation that the malformation was an incomplete cervical spina bifida, the vertebra being expanded laterally, as well as otherwise destroyed. The torticollis was, of course, an incidental effect of the underlying malformation.

Dr. Sayre said when he first glanced at the patient he thought it was an ordinary case of torticollis. As soon as he felt the neck, he saw it was not the usual kind of torticollis. There is atrophy of the muscles on one side of the neck and an unilateral lack of development of the face, it is true; but in addition to these features there are bony growths not found in ordinary torticollis. There is great distortion of the upper ribs not found in such cases, and there is more of the rigidity in the neck than that due to shortened muscles—rigidity due to improper movement of the cervical vertebrae.

Apparently some of the upper vertebrae have coalesced. They do not present the ordinary picture of cervical vertebrae. It was an extremely difficult case to examine on account of the short distance between the ear and the shoulder.

The child's condition has improved during the past month. It is not practicable to do anything more at present than to give a suspension apparatus, and have the child placed in a chair with the head stretched out a reasonable time each day. The child could not be suspended long at a time. It has been suspended a moderate amount, with the neck stretched out, to see if we could not get a better skiagraph after the yielding of the muscles.

On a closer view of the antero-posterior skiagraph, it looks as if the spinous processes possibly had not coalesced; simply had that appearance from the hunching up of the angle of the ribs on the posterior side. The spinous processes may have been twisted, and that might have been one of the hard things felt on the side.

As to mane on back, that is often seen in spina bifida occulta, as it is mentioned by the German and French authors. He had seen it but seldom. A boy with lateral curvature, under observation at present, has an extremely heavy mane.

Dr. Myers presented a case of syphilitic joint disease. H. S., fourteen years. No family history of tuberculosis or syphilis obtainable. Child has had an ozena for four years; fistula leading to carious bone. In nose two years, and in left elbow one and one-half years. Later, an abscess appeared in parotid region, and seven months ago,

without injury, the left knee became swollen. There was some heat, a little pain at night only, no redness.

On admission to St. Luke's, December 4, 1903, the circumference of the left knee was two inches larger than the right; fluid in the joint and induration about it, with noticeable enlargement of tibial shaft, though it was one-eighth inch short. Marked muscular atrophy of thigh. Flexion from 175 to 80°. No spasm. No pain.

Skiagraph showed marked enlargement of tibia and radius and lower end of the humerus, all on left side.

A marked keratitis was present, and thought by Dr. Cutler to be of specific origin.

Specific treatment was instituted at once, and the change in the child's condition is remarkable. The swelling of the knee has almost entirely subsided, and the motion increased proportionately. The sinuses in nose and elbow are closing fast, and the corneal opacities are less.

A tuberculin test January 13 gave a slight transitory reaction, which was not considered of diagnostic value.

Dr. Sayre asked how vigorously the syphilitic treatment had been pushed in that case.

Dr. Myers replied that she came to the hospital December 4. Had had bone lesions for two years. Was given iodide 13 grains three times a day and bichloride four.

There has been a great improvement as to discharge from nose and corneal opacity. She can read with that eye now; could not do so before.

Dr. H. L. Taylor presented a case of Pott's Disease in which the principal interest consisted in comparing the man's present condition with his condition about five years ago when shown to this section. The man had suffered at that time for several months from excruciating pain in the lower part of the spine and flanks; the pain was so severe he could scarcely move, there was stiffness and very marked cachexia, but no kyphos. A jacket was applied once or twice, but he would not keep it on, saying he could not stand it. It was thought at the time the man was shown to the section that he had carcinoma of the spine. He had been admitted to the hospital, but had only remained a short time, and had not returned for treatment.

After an absence of five years, the patient appears with a well developed kyphosis, much bowed over, but in fair health and able to get about. He is satisfied with his state, and will wear no brace or jacket, but the disease, which is undoubtedly tuberculosis of the spine, is no doubt still progressing.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

CYSTITIS IN THE FEMALE.*

BY CHAS. W. HIBBITT, A.B., M.D.

Cystitis in the female you find rather a common disease, both the acute and chronic forms. It can not help but be noted that in some it is a symptom of other trouble, yet comparatively little notice of it will be taken by patients until a true cystitis has developed.

Amongst the predisposing causes we may mention vesical irritation by uterine displacements, tumors, pregnancy, and stone, all the above causing a difficulty in the passage of urine, resulting in retention and decomposition, followed by irritation and inflammatory changes in the mucous membrane, producing a suitable soil for the bacteria, and thus cystitis develops. Chemical changes in the urine, resulting from certain diet or the use of irritating drugs, may produce the conditions favorable for infection. Inflammation and infection are also produced by injuries from introduction of catheter, sound, or instruments of any kind.

Any infectuous or inflammatory condition about the vulva or reproductive organs may extend to the urethra and bladder.

Any infection in the kidney may also produce the condition by the infected urine coming in contact with the bladder walls.

To sum up, infection is without doubt the most frequent cause of cystitis.

Prominent among the exciting causes must be mentioned the gonococci, tubercle bacillus, staph and strept. pyogenus and bacillus coli communis.

*Read before the Society of Physicians and Surgeons, Louisville, Ky.

One word as to infection by catheter. This is no doubt caused by the nurse or physician trying to pass catheter by touch and not by sight, even without cleansing parts, thus forcing septic material from the external genitals into the urethra or bladder. With the foregoing facts, we can say cystitis is always caused by the presence of micro-organisms where there is a predisposing cause.

It is necessary that we note the pathological changes, so we may arrive at a better diagnosis as to the variety. After irritation or infection the mucous membrane becomes congested, and the light red or pink color gradually assumes a deeper and angry red, the epithelium is thrown off in some places, and here ulceration takes place and pus appears.

In cases where mixed infection is present, it will be difficult to distinguish between the different bacteriological varieties.

The diagnosis of cystitis is easily made by proper examination; we must, however, remember one point, that every female coming to us with history of vesical tenesmus, painful and frequent urination, does not necessarily have cystitis. These conditions are frequently caused by mal-positions of the uterus, continued pressure of tumor, certain conditions of urethra, and also by cystocele following a relaxed perineum. These conditions, however, may and do produce cystitis by continuing for a period of time without being corrected.

It is, then, our duty to make a careful examination of the genital organs and others to exclude all such conditions which might produce this irritable bladder.

With the patient giving history of frequent urination, pain, alkaline urine and mucopus, there can hardly be any mistake in the diagnosis, but full knowledge as to its cause and variety will be of very great value, and aid us materially in the treatment. The endoscope and cystoscope are of material aid to us in diagnosing the varieties, also the progress the sub-acute and chronic cases have made, as experience has taught us that direct inspection of the bladder wall yields the best results in the diagnosis.

The gonorrheal variety is usually an extension of the infection from the vulva and vagina up through the urethra, and needs only the appearance of the gonococci in the urine to clear up the cause.

So in the tubercular the diagnosis and cause is determined by the appearance of the tubercle bacilli in the urine, but they can not always be found present. The tubercle bacilli descending from the kidney to the bladder, this being the usual means of infection; my experience in

the tubercle cases which have come under my notice is that pain is not always present, and is not as severe as in other varieties.

Catarrhal cystitis, as a result of a chronic inflammatory condition of the lining of the bladder, is noted by the congested and reddened appearance of mucous membrane and the loosening of the epithelial cells.

The urine in this variety is usually acid, but may become alkaline if the case advances and does not improve; should this catarrhal condition not have prompt attention the inflammation may extend, involving the deeper structures of the bladder walls and produce a suppurative condition, the urine passed will contain large numbers of epithelial cells and pus.

The symptoms in the acute stage are frequent desire to pass water, and only a few drops at a time, with great burning pain along the urethra, and severe vesical pain also.

An elevation of temperature, which may be preceded by a chill, feeling of fullness and weight in region of bladder. The pain is constant, and is usually not relieved by emptying the bladder. We may have partial or complete retention of urine, or patient may pass small amounts frequently or it may dribble for a long time without emptying the bladder completely. In the chronic variety the symptoms are less severe than in the acute; pain is usually present at the beginning of act, and so makes the patient hold her urine longer; the urine, after being passed, becomes cloudy, and contains pus corpuscles, blood, mucous and uric acid crystals.

The constitutional condition of these chronic cases is worthy of note; they have no strength, no appetite, emaciation usually, sometimes chills and fever, and they gradually lose ground.

The prognosis is usually fair in the larger number of cases, but considerable depends on the care and thoroughness of the treatment.

A few words as to the prevention of cystitis. Avoid the introduction of infectious material into the urethra and bladder. Avoid using catheter under bed clothes, and without seeing what you are doing. Always have it sterile (which is an easy matter), and, in addition, disinfect the vulva, external meatus and parts about before passing.

Same conditions, due to faulty elimination, call for hygienic and medical treatment to correct this faulty condition, and thus prevent a concentrated chemically changed urine, which may affect the bladder walls and produce a cystitis. Any defect about the pelvis may obstruct the progress of labor, and the prolonged pressure upon the bladder may be the beginning of this trouble.

As to the treatment, first in the acute cases they must be put to bed. This in itself will give great relief; relieve pain and nervous irritability by morphine or opium in some form, but remember we must not keep the morphine up for any length of time, and we will have to resort to the ice or hot water bag placed over the bladder and hot vaginal douches three or four times a day to relieve the congestion and to give our patient more comfort. In addition we may use the hot sitz baths. Laxatives are now indicated (salines by all means), given in small doses frequently (every few hours). Diet must be of the not stimulating variety. Milk by all means is preferable and indicated.

Drugs are indicated to change the quality and quantity of the urine. If the urine is excessively acid, citrate or acetate of potassium or bicarbonate of soda will give happy results, but always give with plenty of water. If the urine is alkaline, we should endeavor to make it mildly acid by the use of acids, benzoic or boric acid. Large quantities of alkaline waters should be given—six, eight to ten glasses a day, to combat the acidity. In addition to the above, we may get some little effect from salol and boric acid every few hours, but to get any appreciable results from boric acid, it will have to be given in large quantities. Urotropin is also of value, but in my hands it has given much more brilliant results in the chronic than in the acute cases.

Hyoscyamus and belladonna must not be overlooked, because they certainly have a good effect on the vesical irritability, given internally or used in form of rectal suppository.

Do not consider using local treatment, namely, irrigation and application to the lining, during the acute stage.

If we find the trouble does not yield to the above treatment and it is passing into the sub-acute stage, we must adopt a different line. Now a more stimulating effect is desired upon the bladder walls, and we may use copabia, oil eucalyptus and oil sandalwood; especially are these efficacious in the gonorrheal variety. Some few cases will have no severe symptoms whatever at the onset, and will be in the chronic state when they apply for treatment.

In the sub-acute and also the chronic stage is the local treatment to be used, that is, by applying to the diseased portion of the mucous membrane of the bladder through the endoscope and by irrigation through a catheter, allowing the solution to come in direct contact with the entire bladder wall.

Irrigation of bladder is necessary; by it the bladder is cleared of large numbers of bacteria, and large quantities of mucus and pus,

which could hardly be passed in the urine. This irrigation can be carried out in two ways, first by allowing the fluid to run in and directly out again, or by letting the bladder fill up before allowing it to flow out, to me the latter is the ideal.

In irrigation of the bladder we may use first normal saline solution, permanganate of potassium 20 grains to quart, boric acid, saturated solution, or bichloride, 1-50000. One irrigation of one quart a day is sufficient unless the case is severe. The best method is to use a fountain syringe of whatever pattern, with either glass or rubber catheter, preferably glass, for it is easily sterilized. Allow the solution to flow slowly in till the patient complains of fullness and discomfort; then we may feel sure that the fluid has distended the bladder walls and has come in contact with all parts, then allow it to flow out, continue this and at the end allow a little of the solution to remain in the bladder, directing that it be passed in an hour. Nitrate of silver solution, 1 to 5 per cent, also ichthyol solution, 1 to 5 per cent., may be used by irrigation, but normal saline should follow the stronger silver solutions.

In these old chronic cases, after a few irrigations you will notice the increased capacity of the bladder and the irritability lessened. In the ulcerated variety, or where certain areas are affected, we can by the use of the Kelly speculum or cystoscope, with a good light, expose them to view, and make direct application to them, taking care only to apply to diseased areas; for this treatment nitrate of silver is best, using it from 1 to 20 per cent., according to the case.

Some advise injections into bladder by long syringe in stronger and smaller quantities than by irrigation, and allowing them to remain. Ichthyol, 10 per cent.; iodoform, 10 per cent. emulsion, and nitrate of silver, but we have no direct proof that they come in contact with all the diseased portions, and so I think irrigation and local application are more practicable. Yet in the tubercular variety we can not help but know that the stronger solutions will accomplish more in a short time than irrigation would.

Surgery offers some means of relief where other methods have failed. In the first place put the bladder at rest by making a vesico-vaginal fistula; irrigate the bladder daily afterwards through the urethra until cured, then close up the fistula. The objection to this is the constant dribbling of urine out by way of vagina, causing inconvenience and irritation.

Curettage of the bladder may be accomplished through a cystoscope; this is indicated where we have tubercular or indolent ulcers. Phos-

phatic deposits may be present and cause the condition, but they can usually be broken up by the finger through the urethra into the bladder.

LOUISVILLE, KY.

ACUTE ARTICULAR RHEUMATISM.*

BY R. LINDSAY IRELAND, M.D.

This disease is believed by many authors to be of infectious origin. It is characterized by fever and inflammation of various joints of the body, usually profuse perspiration, and a tendency to endocardial inflammation.

About its cause much is said and written of little interest, because of the several theories advanced by different writers, and all acknowledging that a definite cause has never been demonstrated. An accumulation of an excess of lactic acid or of uric acid in the system and that of bacterial infection being the causes most generally discussed, and some one of which is usually credited with the offense by students of this disease. The writer is of the opinion that it is of bacterial origin and infectious, though, like many other diseases that are caused by germs, its specific bacteria has not been isolated or demonstrated. The disease prevails in certain families, and both sexes and all ages are susceptible to it, but those exposed to severe weather or sudden changes of temperature, especially if free perspiration, followed by exposure to drafts, or sudden chilling of the body, is an aiding factor in its causation. Since from early adult life to middle age is the period of life in which people are most exposed to these abetting influences, it follows that the disease should naturally be most often encountered then.

Sahli has frequently found throughout the body a coccus morphologically identical with the staphylococcus citreus, and Singer has found a variety of bacteria in the urine of cases afflicted with acute articular rheumatism.

The observations of Sahli suggest that the various local lesions of acute articular rheumatism may result from a multiple localization of bacteria. However, since nothing practical would probably result from a discussion of these theories by one no more familiar with them

* Read before the Louisville Society of Medicine and Surgery

than the writer, I shall refrain from further demands upon your time for this part of the subject.

The anatomical changes are those of a sero-fibrinous inflammation of the joint and neighboring tissues. The synovial fluid is increased in quantity, opaque and contains red and white blood cells, the synovial membrane is swollen, injected and hemorrhagic. Abscesses in these tissues are rare, and seldom does disease of the bone or cartilages ensue.

The onset of acute articular rheumatism is quite rapid; chilly sensations and fever, with morning remissions and evening exacerbations. Tonsilitis is not infrequently present. The joints of the lower extremities are usually affected first, by being swollen, red and very painful, the pain at times being excruciating and necessitating the administration of an anodyne, sleep usually being far removed without measures to relieve pain, locomotion or the slightest movement of affected joints being attended by additional pain. When exudation occurs into joints the pain usually diminishes, and as this occurs the condition frequently begins in another joint, the tendency being for several joints to become affected. Profuse inflammation usually accompanies the inflammation, which has a sour odor and an acid reaction, but does not contain lactic or uric acid. Nausea, headache and loss of appetite usually attend the fever, which latter remains elevated for some time after swelling subsides. Urine is scanty, high colored, frequently uric acid crystals and urates are increased and of high specific gravity; on the other hand, uric acid may be diminished.

Some high authorities assert that the course and duration of the disease is but little affected by treatment; the course of the disease is generally terminated in from one to six weeks.

The worst feature of acute articular rheumatism is the complication of endocarditis, which occurs in probably 20 per cent. of the cases, and pericarditis or myocarditis may also ensue. These complications, when they occur, are usually made manifest about the second week. Pleurisy or pneumonia may also attend the disease, and when they do, usually the left side is affected, probably an infection from pericarditis.

Cerebral complications are at times quite conspicuous; various mental disturbances may occur during the course of the disease, delirium, melancholia, or even suicidal intentions may arise. In children sometimes chorea alternates with acute articular rheumatism. Cutaneous eruptions may appear; the most frequent are sudamina during sweating stage, urticaria, erythema, or pemphigus and purpuric

spots have been seen. Also subcutaneous nodules appearing towards the end of the disease in children is described by Fitcher and Jaccoud. They usually occur upon the tendons and ligaments, or about elbow or knee, feeling like peas, and sometimes remain for months.

Acute articular rheumatism may be diagnosticated from osteomyelitis, but the typhoidal symptoms of the latter and extreme sensitiveness of the bone will usually suffice to differentiate. The termination of acute articular rheumatism is generally favorable, but recurrences are apt to recur, and the mortality, which is placed at about 3 per cent., is usually due to the complications enumerated.

TREATMENT.—Since the disease is attended by profuse perspiration and great pain on slight motion, it becomes necessary to have patient wear long gown open in back, which can be frequently and quickly changed, so as to give the least amount of pain to the patient and shortest exposure to air. The diet should consist of milk, barley, oat meal, or other gruels, at short intervals and in moderate quantities. Highly nitrogenous food should be avoided until convalescence is established or assured. The local application of 30 per cent. solution of ichthyol covered over thickly with wool batting and sand bags closely moulded around either side of afflicted joint helps to relieve pain and reduce swelling; counter-irritation in the form of blisters sometimes ameliorates the pain. In Germany the ice bag or cold pack is much employed; this the writer believes to be a most excellent procedure.

The oldest treatment, perhaps, is that of the alkaline potassium salts. I shall not give this in detail, for I do not consider it the best treatment.

The best internal treatment for acute articular rheumatism, in the humble opinion of the writer, is the use of the salicylates, preferably the strontium salicylate or ammonium salicylate, or a combination which I am fond of using, put up by one of our reliable manufacturing pharmacists, and labeled "Elixir Salicylic Co.," the ingredients of which are acid salicylic, cinifuga, iodide of potassium and gelsemium. The coal tar products are recommended and used by some, but since the dosage must be large to give much relief, the depression which they produce should be avoided. Colchicum is used, but to obtain much result it must be pushed until there is purgation. Quinine is sometimes of service when the salicylates have been pushed until there is free perspiration and weakness. When the temperature is 104° or above, as is sometimes the case, the cold bath should be resorted to.

The local treatment which has been attended by the most favorable

results by the writer, consists in subjecting the affected joint to a superheated dry air for a period of thirty minutes daily until the symptoms subside, which has occurred in my hands in from three to seven days. The apparatus that I use is made by Betz, of Chicago, is simple and not very expensive. It is an oxidized copper, asbestos-lined oven, the heat is obtained by gas or large alcohol lamp; it is heated to a temperature of 250°. The joint is wrapped with Turkish bath towel, to absorb any moisture there might be in the air or from the limb, and placed in the oven and allowed to remain for thirty minutes. The treatment is painless; in fact, it relieves the pain almost at once, which returns in a much less degree, however, after some hours. The daily application of this heat, local application of ichthyol and wool batting and moulding of sand bags, and the administration of the previously mentioned "Elixir Salicylic Co.," in teaspoonful doses every three hours, largely diluted with water, has been the most successful treatment ever used by the humble writer.

LOUISVILLE, KY.

ANESTHESIN IN RHINO-LARYNGOLOGICAL PRACTICE.

BY DR. COURTADE.

(*Allg. wien. med. Zeitung*, 1903, No. 12.)

We have made use in rhino-laryngological practice of an anesthetic which is still but little known. This is regarded chemically as para-amido-benzoic acid, and is known in commerce as anesthesin. In the following article I will briefly sum up the results thus far obtained in the use of this remedy.

Anesthesin, discovered in 1890 by Ritsert, originally attracted but little notice from the medical profession. This was due in part to the slight solubility of the substance in water. But the fact that orthoform, another insoluble substance, acquired repute as an anesthetic, was the means of drawing anesthesin from its obscurity, and the researches of Von Noorden, Dunbar, Leugemann and others in this field met with satisfactory results.

The solubility of anesthesin in cold water is but 1-800, but it dissolves readily in alcohol, ether, chloroform, acetone, fats and oils. The melting point is 89.5 C., and if a little of the powder is placed on

a disc of platinum and exposed to the action of heat, it melts and volatilizes completely. When orthoform is treated thus a carbon residue remains.

In regard to the solubility of anesthesin we have made a few tests, and have established the fact that it dissolves in warm glycerine, but is again precipitated when the temperature of the solution falls. The solution remains clear as long as the temperature can be borne by the hand.

A mixture of anesthesin and glacial carbolic acid fuses under heat and forms a clear liquid, which sets when the mixture cools. If while the latter is still fluid warm water is added, a powder-like product separates, which is doubtless the anesthesin but when glycerine is added the solution remains clear and fluid, even at ordinary temperatures.

In our clinical investigations we made use of anesthesin in its powder state. In the case of a youth of fifteen years, both of whose tonsils we cauterized, we applied beforehand a little of the anesthesin on a pledget of cotton to the right tonsil, while the left was not medicated in any way. Upon the right side the cautery was not painful, but on the control side the pain was considerable. To eliminate the effects of suggestion, the patient was not advised in any way that one of his tonsils had been anesthetized.

Whenever a little of the powder is applied to the tongue a diminution of sensibility is felt in from one to two minutes on the area involved.

A woman, aged thirty-eight years, who was a victim of tuberculous laryngitis, and who suffered so much on swallowing that she refused to eat and in consequence became weaker and weaker, received an insufflation of anesthesin in the larynx. Immediately thereafter swallowing became painless, and so remained for forty-eight hours. Even eight days later, at which time we saw the patient again, the act of swallowing was not nearly as painful as before the insufflation.

We used the remedy also in the case of a man, aged thirty-four years, who had been syphilitic for ten months, and who presented on the posterior left palatine arch a deep ulcer, which, despite internal treatment, remained unchanged for fourteen days. This ulcer caused violent pains during swallowing, so that patient ate as little as possible. In addition he suffered from a flow of saliva, which caused him to spit continually, and thereby deprived him of rest. In the opinion that the ulcer was of non-specific nature, although developed upon a

specific soil, we painted it with a 20 per cent. solution of methylene blue.

When we saw the patient eight days later, the pains had not been so acute for several days; we then changed the treatment to anesthesin, which was strewn upon the ulcer. A quarter of an hour later the patient was able to take his breakfast without a single pain. A second insufflation, given toward half past four of the same day, rendered the swallowing of saliva painless until 9 P.M.

The ulcer, the diagnosis of which could have been made only after microscopical examination, healed after eight days. The patient continued to suffer, but not so much as before. Laryngological examination showed an infiltration of the entire epiglottis and the presence of small superficial ulcers. The inter arytenoid region, the true and false vocal cords, were normal. An insufflation of powdered anesthesin enabled the patient to eat breakfast without pain, and to take his noon meal with but little distress.

These observations show in typical fashion the action of the anesthesin, and at the same time its harmlessness. We have also used the remedy to facilitate laryngoscopic examinations, and practiced insufflation of the pharynx whenever application of the minor was badly borne.

In all cases in which we had recourse to anesthesin, whether to apply it superficially, or by means of cotton pledgets, or by insufflation, we invariably used it in powdered form, and it was always well borne, and never caused phenomena or irritation.

In laryngitis which was accompanied by painful dysphagia, Kessel has used anesthesin dissolved in olive oil according to the following formula:

℞ Anesthesin, 20 grm.;
Menthol, to 10 20 grm.;
Olei olivarium, 100 grm.

In case menthol should not be well borne, it may be omitted. We believe, however, that the powder is preferable to the solution.

Anesthesin has been used inwardly for round ulcer and other affections.

CANCER OF THE BREAST.*

BY DR. F. W. SAMUEL, A.M., M.D.

I would designate as an early operation one performed before any enlarged glands are demonstrable along the border of the pectoral muscle and before the skin has become involved in the infiltration. I regard this period early, for the rule is for patients to keep away from their physicians for at least three to six months after a nodule has been discovered, and ordinarily they do not present themselves for treatment until the tumor begins to enlarge, becomes painful, and in a majority of cases not until the skin has become involved.

The systematic cleaning out of the axilla was first advocated and practiced by Volkmann, Billroth and Kuster, whose results were probably the best obtained until within a short period of the present time. Although these operators labored faithfully to master the disease by constantly extending their operative measures, local recurrence in their practice was enormous. Even as late as 1893, Bland Sutton laid great stress upon the importance of avoiding opening the axilla, if possible, on account of the added risk to the patient. Volkmann, Billroth and others were systematically cleaning out the axilla and removing the pectoral fascia in the early stages of breast cancer long before this, and Volkmann removed part of the pectoral muscle when satisfied of its involvement. To the last named operator we owe the statement of the difference, prognostically between the involvement of the pectoral muscles by extension of the growth and the invasion of the muscles by metastasis. This may be explained, as Ludwig says, by the cellular elements entering the lymphatic system of the muscle and being carried rapidly by the muscle contraction throughout its fibers. It is not necessary that the tumor be adherent to the muscle in order that the muscle itself be involved, and, as stated by him, carcinoma may be imbedded in muscle and still not *involve* the muscle, by virtue of the fact that the lymphatics spread out upon the fascia and do not follow the blood vessels in the connective tissue septa between the muscle fibers, in which theory he is supported by Heidenhain, whose investigations have proven that the direction of the lymphatic current is from muscle to fascia and not in the reverse direction. So much was Volkmann impressed with the fact that the fascia is involved long before the muscle, that he adopted a method of

*Read before the Louisville Clinical Society.

operating which has become classical. It has been his advice to remove the fascia of the pectoral as clean as possible, and he asserts that when carcinoma has made its way into the lymphatic vessels it has invaded the fascia down to the surface of the muscle, however thick the layer of fat between the breast gland and muscle has been, even if it still remain perfectly immovable.

I am more and more convinced that the inoperable cases, from local and regionary recurrences coming constantly under my observation, that such an operation as I would plan when there is noticeable, or rather palpable, nodes along the border of the great pectoral at the base of the breast is just as applicable and just as much demanded, if not more so, than in the reverse case. In the most favorable case I am convinced that the pectorals major should be removed, and that the axillary artery and vein be cleaned off, and the entire axillary contents removed, sparing only such nerve structures as may be. Every now and then I hear some feeble complaint against the removal of the muscle, generally on the ground of disability, but as it is not known until after a microscopical study of the muscle fibers whether or not they are involved, and as they are involved, as a rule, before the axillary lymph nodes are palpable, it is poor surgery to leave the muscle behind, the loss of which does not, as we know, entail a great amount of disability as far as the arm is concerned.

It is not the purpose of the writer to consider the cause of cancer, but to urge a painstaking care as to diagnosis early in its history, and a more radical surgical treatment than is generally instituted.

One of the most interesting surgical problems, clinically, to the surgeon is cancer, because of its increase in all quarters, and this is especially noticeable in the more civilized countries, which may be, as has been admitted, due to improved diagnostic means and the data that has been yielded from the vast amount of laboratory research.

The mystery of its origin is as obscure now as in the days preceding cellular pathology; as to cause, no pathological problem has received more thought and speculation, earnest effort and unremitting toil, out of which we have, after all, a mass of negative proof. No sooner had one observer claimed that he had found the cause when an army of workers in the same field would demonstrate his errors.

We do, however, know something of its cell characteristics. We know that cancer, as well as other malignant growth, is essentially a cell proliferation that has, biologically, many features that are opposed to the physiological tissues in which they take their origin. We find

an atypical life history in the cancer cell, and it is a well established fact that the nucleus perpetuates the nature and function of the cell.

It is the elucidation of this form of cytomorphosis possibly that the key to the control, inhibition and elimination of the atypical cell proliferation which constitutes malignancy will be found.

In the diagnosis of carcinoma of the breast we may well disregard the adage that age is important, as I have now operated upon three cases that were under thirty. This is well established by the mass of accumulated clinical data by many operators as well as pathologists.

The following represents the number of cases that I have kept the clinical notes of, and represent the entire number of cases that I have operated upon from 1889 to the present time :

From 1889 to January, 1904, I have operated upon 30 cases of malignant tumors of the breast, 22 of which have been microscopically defined as carcinoma. In the entire series there occurs one sarcoma.

From 1889 to 1895, I operated upon eight cases of carcinoma. Six of these were by an incomplete method, two by what we then called a complete method, *i. e.*, the axilla was invaded, and such lymphatics as were seen and felt were removed. To-day we regard that as an incomplete method. Since that time I have operated by a more radical method in all cases. In three cases I have, on account of an error in diagnosis, operated incompletely, as each case proved by microscopical evidence to be malignant. In one a typical transition stage, as was shown by the cell proliferation.

It is these tumors in young women often small, that are diagnosed as fibroma and simply excised, that mistakes occur ; true fibroma in the breast must be accounted rare ; they are typical adenoma. As these tumors frequently arise from the adventitia of the milk ducts or the connective tissue in conjunction with the hyperplasia of the gland tissue, this fact, taken with the recent pathologic observations, places them, on account of the tendency to become malignant, clinically among the malignant growths, and should receive the same treatment.

In my next last case, the specimen which I show you to-day, the young woman is only twenty-seven years old, the growth was noticed eight months before I saw her as a small lump in the lower and outer quadrant of the breast, painless ; two months after she noticed the growth and acute mastitis attacked the breast, and pus was evacuated. The inflammatory infiltration into the breast never subsided, and the growth evidently enlarged rapidly from this cause. When I saw her two months after the breast was entirely invaded with the inflammatory

exudate as I took it ; had nodular appearance, hard, tender, and there were a few hyperaemic areas. I did an incomplete operation in this case, and the microscope shows, as you can see by the section, a carcinoma (adenoma).

Of the remaining eleven cases I have been able to follow six that have gone from two years to four years without a return. This does not include the last three cases operated upon, as two of them are of too short a period to signify anything as to a probable cure, and the other case, which I detailed a part of the history, was incomplete and will return.

LOUISVILLE, KY

Progress

of

Medical and Surgical Science.

Differential Diagnosis of Rheumatism and the Arthritides.—

Thomas F. Harrington states that rheumatism and arthritis are not synonymous terms. The characteristic symptom of rheumatism is an arthritis, but there are many arthritides which can not be associated with rheumatism as clinically accepted. No case of arthritis should be considered rheumatic unless an undisputed attack of acute rheumatism can be given. Rarely is rheumatism diagnosed other than it is; the danger lies wholly in the opposite direction. There is probably but one form of rheumatism, namely, acute rheumatism. The writer then suggests the following classes of arthritis: Infective arthritis, arthritis deformans, osteoarthritis, traumatic arthritis, gouty arthritis, hemophilic arthritis and senile arthritis. Idiopathic arthritis probably never occurs. In infective arthritis there is usually a history of a primary infection to which the arthritis is secondary. Arthritis deformans closely resembles rheumatism in its acute stage, and may occur in combination with acute rheumatism, but it is not caused by rheumatism. It is non-inflammatory, and may occur without pain. There is seldom redness or tenderness. It is rarely monarticular, and it never suppurates. It is probably due to some nerve disturbance. Osteoarthritis may result from many causes. It may start without any known cause. It is essentially a chronic disease. In traumatic arthritis the history of the case is important. There is usually water in the joint in traumatic cases. The characteristics of gouty arthritis are sudden onset, especially at night, often disappearing in the daytime, also the presence of deposits in the ear (tophi). It attacks usually small joints. Hemophilic arthritis usually occurs between the fourth and sixth years, and most often in males. The joints affected are knee, 50 per cent.; elbow, 25 per cent. In senile arthritis there is a thickening of the capsule, but not of the bones. It has no relation to

rheumatism, and is more stiffness than soreness. It does not involve the heart, and grows better as the day progresses. In children the family history, or a history of "growing pains," especially if accompanied with slight swelling (fibrous nodules) suggests rheumatism.—*Medical Record*, February 6.

The Effect of Revaccination during Pregnancy of the Child. by J. W. Ballantyne, (*Progressive Medicine*, Vol. III., page 295.) Numerous cases are on record to prove that revaccination of pregnant women may render the infant temporarily insusceptible to vaccination after birth, while statistics show that such cases are not always immune. The percentage is entirely too high to be accounted for by idiosyncrasy or accidental cause, the proportion being anywhere from 32 to 80 per cent., and he concludes that it is safe in saying that one out of every three is protected by the vaccination of the mother in second pregnancy. He admits that it is true that an infant has never been born with a vaccination pustule on it as the result of the vaccination of the mother, but similarly an infant has never been born with the primary sore of syphilis upon its genital organs. This is explained by the fact that the point of contact of mother and fetus is in the placenta and not on the fetal cutaneous surface, so that if vaccination mark occurred in antenatal life it would have to be looked for in the placenta. Protection is either afforded by a direct transmission of antitoxine elaborated in the maternal tissues to the child, or what is more probable that the immunizing agent passes to the fetus and acts on its fluids and tissues, and that these elaborate the antitoxine. It is also proven that this immunity does not last long, possibly not over six months.

The immunity is comparable rather to that produced by immunizing serum than to the protection conferred upon the infant after birth by an arm vaccination.

The conclusions are that in epidemics of small-pox that every pregnant woman should be vaccinated or revaccinated for the sake of her unborn child, if not for her own sake. It is also noted that the infants of women who have been revaccinated during pregnancy without success, owing presumably to earlier vaccination, may yet be born with a certain degree of immunity. This was shown to be the case in 31 out of 44 unsuccessful revaccinations.

Pathology of Inebriety.—T. D. Crothers offers the following conclusions: 1. In all cases of inebriety there are marked changes in the capillary and vascular system of the brain. The walls of the vessels

show fibrinous deposits and sclerosis. The nerve cells and dendrites are altered and retracted, in some cases permanently destroyed; in all inebriates shrunken and disintegrated states exist. 2. The liver, kidneys and heart show diminution or enlargement with fibrous and fatty deposits. Both the organic and functional activity of the organ are changed and sclerotic states are present. Conditions of starvation and poisoning exist in all cases. 3. Pathologic changes are apparent in the paralysis of the sense organs and the higher psychic functions of the brain. These conditions are so common following the use of alcohol, sometimes in its moderate use but always when taken in excess, as to constitute a pathology that is traced directly to alcohol as the most prominent cause. 4. The recent researches into the chemico-physiologic action of alcohol on the heart, blood vessels, cells and nerve fibers show a paralyzing and eroding action that can not be mistaken for any other cause. The final conclusion is that the peculiar brain and nerve wreckage so commonly seen in persons using alcohol is due to the specific cause, alcohol following a uniform line of degeneration which is traceable with more or less exactness.—*Medical Record*, February 6.

Interstitial Nephritis and Pyelonephritis Treated by Permanent Catheterization.—(Cabot *Boston Medical and Surgical Journal*, November 19, 1903) believes that when efficient drainage is afforded to patients offering the clinical picture of a pyelonephritis complicated by a pre-existing interstitial nephritis a great amelioration or even total disappearance of febrile and uremic symptoms is generally brought about. There is a considerable increase in the amount of urine, and also an increase in the amount of solids eliminated.

The author believes that immediate continuous catheter drainage of an over-distended bladder is often better than intermittent catheterization. By thus establishing a constant outflow, all danger of back flow up the ureter is removed, and thus are greatly diminished the chances of pyelonephritis.

It also seems probable that in cases of dilated ureters, permitting regurgitation of the urine from the bladder back to the pelvis of the kidney, prolonged drainage of the bladder will permit such a shrinkage of the ureters and ureteral orifices as to result in normal valvular action of the ureters and the prevention of retroflow.—*Therapeutic Gazette*.

The Treatment of Infantile Syphilis by Hypodermic Injections of Binioidide of Mercury.—Schwab and Levi-Bing in *La Presse Médicale*

of October 31, 1903, report five cases of hereditary syphilis in infants which they treated satisfactorily by means of hypodermic injections of biniodide of mercury, in doses varying from one to two milligrammes, administered once daily, in aqueous solution. The injections were well tolerated, produced no local irritation, and were followed by the rapid disappearance of the cutaneous and visceral lesions. All the children gained in weight from the time that treatment was begun. The ages of these patients ranged from one day to three months.—*Therapeutic Gazette.*

The Gluten Flour Fraud.—The exposure, by the State Board of Health of New Hampshire, of the fraud practiced upon the purchaser of anti-diabetic gluten flour, shines forth like a good deed in a naughty world. Fourteen brands of flour made by six or seven firms, and advertised as healthful products for diabetic patients, were analyzed and found to average almost 48 per cent. starch. It is a simple matter to test the starch reaction in any flour, and a notorious fact that there are no starch-free flours to be had, but it is a surprise to find such a large percentage of starch contents in all. As a matter of fact there is less danger in permitting the diabetic patient to eat a certain prescribed amount of well baked bread or toast, than deluded with the belief that the vile bread made of gluten flour is harmless—to give him free rein with this indigestible article. No suitable substitute for bread has as yet been devised, and, least of all, are the claims made by manufacturers of these glutes to be given a hearing. The frequently existing boulimia of diabetics is additional reason why physicians should warn their patients against the false sense of security given by a supposedly starch-free gluten flour.—*Wisconsin Medical Journal.*

THE AMERICAN PRACTITIONER AND NEWS

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Editorial.

Syphilitic Children—Do They Respond to Any One Treatment?—

Children, as a rule, afflicted with congenital syphilis and in fairly good health as regards their nutrition, may be satisfactorily treated with the syrup of the iodide of iron, or by the inunction of mercury. But a ward containing five cases of congenital syphilis yielded four apparently healthy babies and one death, the latter from inanition, the child at five months of age weighing only seven and one-half pounds, six at birth.

The four other children nearly all responded to different lines of treatment. One girl doubled her weight in two months, and all evidence of an interstitial keratitis, "snuffles," body eruption, and (syphilitic) dactylitis of middle finger (which had to be amputated) disappeared. Her stomach would not tolerate the syrup ferri iodide; when annointed would scream and cry, and when released would lie on her face, apparently happy, until hungry. She was treated with biniodide

of mercury, gr. 1-100, t. i. d., alone fed on Arthur V. Meig's milk formula, and the popular cereal called "Force," a pair of blue goggles put on, and sent out in the sunshine. The child never learned to walk until the age of fourteen months. She began treatment at three months of age, but no treatment that proved of avail until after eight months.

Two of the other children cleared up skin symptoms on the syrup ferri iodide, and their starved condition (marasmus?) after resisting all stomach foods, was greatly benefited by a one drachm of cod liver oil, thrice daily inunction and three hours daily exposure to sunlight.

The remaining child, as also the one that died, was placed on a pillow of 50 per cent. unguentum hydrargyria and fed on the Meig's formula. His condition in three weeks was extremely gratifying. The pillow was daily alternated in its position to the lumbar region, and as soon as toleration to the syrup was accomplished or skin irritation appeared, the pillow was removed.

The suspension of any of these measures in any of the four children was early followed by a return of the symptoms.

EDITORIAL NOTE.

Apomorphine.—In the *Therapeutic Gazette* of some time ago some remarks were made as to the usefulness as an expectorant mostly, and the writer can not only report good results from that use of the drug, but add that a case of "plain drunk" or delirium tremens, when the heart and vascular system has not gone to pieces, the stomach can be nicely emptied by grain 1-12 hypodermically, but when evacuation of the stomach was not accomplished, at least sleep supervened. A sleep of twenty hours was noted in one case, while in two others five and six hours slumber followed its administration. Cardiac weakness and collapse followed its administration in two cases, and prompt stimulation with strychnine, nitroglycerine, whiskey and digitalis were used to advantage. These cases, however, were not fit cases for apomorphine, as their "spree" was of several days' duration, and they were on the verge of delirium tremens when they applied for treatment. Good reports of two score or more were noticed in the same three months with the other cases above mentioned.

Book Reviews.

THE MEDICAL EPITOME SERIES—MICROSCOPY AND BACTERIOLOGY.—By P. E. Archinard, A.M., M.D., Demonstrator of Microscopy and Bacteriology Tulane University of Louisiana Medical Department. Series edited by V. C. Pedersen, A.M., M.D.

This epitome affords a concise and clear presentation of the essentials of bacteriology and microscopy, and is of use to the practitioner to post himself on the main points of bacteriology and microscopy. Every student will find it of service in reviewing this subject; a great deal of matter is neatly arranged in so small a space.

PHYSICAL DIAGNOSIS OF DISEASES OF THE CHEST.—By Richard C. Cabot, M.D., Physician to Out Patients Massachusetts General Hospital, Assistant in Clinical Medicine Harvard Medical School. Second revised edition; 147 illustrations. New York: William Wood & Co., publishers, 1903.

The author very candidly announces that he claims nothing as really original, but places the book before the profession, and especially the medical student as a compilation of the more voluminous and exhaustive works on this subject that our compends are old and very incorrect.

The author has given to the student body at least a very valuable work, thoroughly up to date, with cuts and X-ray photographs illustrating important intrathoracic conditions. The profession as a whole should be indebted to the author for his complete but concise work.

THE MEDICAL EPITOME SERIES; NORMAL HISTOLOGY.—A Manual for Students and Practitioners. By John R. Wathen, A. B., M. D., Professor of Surgery and Gynecology, formerly Professor of Histology in Kentucky School of Medicine, Surgeon to Louisville City Hospital, the St. Anthony's and the Kentucky School of Medicine Hospital, Louisville, Ky. Series edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital, Deputy Genito-Urinary Surgeon to the Out Patient Department of New York Hospital, Physician in charge St. Chrysostom's Dispensary, Anesthetist to the Roosevelt Hospital (First Surgical Division). Illustrated with 114

engravings. New York and Philadelphia: Lea Bros. & Co.

This epitome has supplied the student and practitioner with a condensed treatise on the essentials of histology.

The most important points have been clearly and concisely tabulated, and such of embryology has been included as will aid in a correct understanding and better apprehension of pathology. The arrangement of contents is systematic and the tabulated questions at the end of each chapter make it a good and serviceable book for the student to prepare himself for examination.

A MANUAL OF OBSTETRICS.—By A. F. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Medical Department of Columbian University, Washington, D. C., and in the University of Vermont; President (1885-6-7) of Washington Obstetrical and Gynecological Society; President (1883) of Medical Society, D. C., and of the Medical Association of D. C., 1903; Fellow of British Gynecological and of the American Gynecological Societies; consulting physician to Children's Hospital, Washington, D. C.; Obstetrician to the Columbian University Hospital; member of Washington Academy of Sciences; Fellow of the American Association for the Advancement of Science; Associate Member of the Philosophical Society of Great Britain, and member of the Medical, Philosophical, Anthropological and Biological Societies of Washington, D. C., etc. Ninth edition revised and enlarged. 275 illustrations. Philadelphia and New York: Lea Bros. & Co., 1903.

Progressive development of obstetric science has required some changes in this valuable handbook. Dr. King is successfully keeping his book abreast with our latest development. Obsolete methods of practice have been extracted. It is essentially a student's book. But so thoroughly is the field covered that the practitioner will find it of service in refreshing himself on the essential points of obstetrics. The new chapter on puerperal septicemia is according to our most rational thinkers. His book is an ideal college obstetrics.

A LABORATORY GUIDE IN URINALYSIS AND TONICOLOGY.—By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Physics and Toxicology in the Medical Department of Cornell University, member of the American Chemical Society, and of the chemical societies of Paris and Berlin, etc. Fifth edition. New York: Wm. Wood & Co., 1903.

This little, neatly compiled book, containing general rules for analysis, metric, weights and measures, and a laboratory guide and

general rules for working, is almost an essential to correct and neat laboratory work. It should be in every laboratory.

THE PRACTICAL MEDICAL SERIES OF YEAR BOOKS.—Comprising ten volumes on year's progress in medicine and surgery. Issued monthly under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume II., General Surgery. Edited by John B. Murphy, M.D., Professor of Surgery Northwestern University Medical School. November, 1903. Chicago: The Year Book Publishers, 40 Dearborn street.

This volume is one of a series of ten issued at intervals of one month, the series entirely covering the field of medicine and surgery, being published for the practitioner, and is arranged in volumes, so that one interested on certain subjects can obtain that particular volume. Volume II. is devoted to general surgery, and like the preceding volumes of that series is teeming with matter that is thoroughly reliable, concisely stated, and so conveniently arranged as to make it a ready reference and text book of great value.

BOOKS RECEIVED.

THE SELF-CURE OF CONSUMPTION WITHOUT MEDICINE.—By Chas. H. Stanley Davis, M.D. New York: E. B. Treat & Co., publishers. Price, 75 cents.

VOL. VII., MANUAL OF SURGICAL TREATMENT.—By Cheyne and Burghard. Philadelphia: Lea Bros. & Co., 1903.

VOLS. II., III., IV. OF PROGRESSIVE MEDICINE.—Edited by H. A. Hare. Published by Lea Bros. & Co., 1903.

DISEASES OF WOMEN.—By Thos. A. Ashby. Baltimore: Williams & Wilkins Co.

MEDICAL EPIITOME SERIES.—Anatomy—Hale—Pederson. Philadelphia and New York: Lea Bros. & Co.

VALUE OF THE SCREEN TEST AS A PRECISE MEANS OF MEASURING SIGHT.—By Alexander Duane, M.D., New York.

SUGGESTIONS FOR A UNIFORM NOMENCLATURE OF THE MOVEMENTS AND MOTOR ANOMALIES OF THE EYE.—Alexander Duane, M.D., New York.

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Society met at Seelbach's Hotel, with Dr. F. W. Samuel as host, Dr. J. W. Irwin, President, in the chair.

COLLES' FRACTURE.

Dr. John R. Wathen: I have here an X-ray picture showing how difficult it sometimes is to make the diagnosis of Colles' Fracture.

The first is that of a man forty-five years of age, in average flesh, who fell upon his arm yesterday, and complained of soreness of the wrist, but said it was not fractured. I thought I could elicit crepitus, and the picture shows a very bad fracture.

The second was a woman of sixty, very fleshy. There was no crepitus or deformity, but you can see the fracture. This being an important case, I had two prominent surgeons see her with me, and we all thought there was no fracture.

The third is that of a boy twelve years old, who was shot through the wrist with a 38-calibre revolver at a distance of fifteen feet. From the position of the wounds of entrance and exit, it is impossible to see how the bullet could have passed through without more serious injury to the bones. The picture shows the radius chipped in one or two places.

Dr. Ewing Marshall: We are often called upon to determine the extent of injury following falls upon the hand, and even men of the greatest experience will fail at times to detect a fracture. In some cases it is not wise for the patient to know he has had a fracture, provided he gets perfect function, and in such cases the X-ray picture would be a disadvantage. If the treatment would not be changed by the diagnosis, I do not see the advantage in the X-ray picture.

Dr. T. P. Satterwhite: Since there was no deformity in these cases, I would like for Dr. Wathen to tell us about the treatment instituted.

Dr. G. W. Griffiths: From the medico-legal aspect, it is at times exceedingly dangerous to take these fractures to the X-ray, and let them see the condition of the bones. If it happens to be one of those ignoramuses or a designing man like some of these pensioners, there is likely to be trouble resulting. Of course the X-ray is a good thing, *per se*.

Dr. F. W. Samuel: Fractures about the joints are always interesting, especially Colles'. I never saw a Colles' Fracture in which crepitus could not be elicited by proper manipulation, and I have seen a great many. Usually the deformity is so characteristic that you could hardly miss it, though it is not easy to obtain crepitus, as there is uniformly impaction.

So far as I am concerned, I never fear the medico-legal aspects of the case after doing my duty. It is not a disgrace to fail to make a diagnosis, and the patient must assume certain responsibilities himself. In treating a Colles' Fracture we ought never, under any circumstances, to allow a case to go until we have elicited crepitus. The cardinal feature is to break up the impaction and make readjustment, and this can be done only under an anesthetic, and then the diagnosis is easy without the X-ray. The X-ray is difficult for me to interpret and I would not say that I could demonstrate absolutely a fracture from a radiograph because the epiphyseal line may look like a fracture. Of course, there is no doubt in these cases.

In all cases an anesthetic should be given, and the parts examined to determine the matter, and if there is any impaction, as there usually is that should be broken up in order to make readjustment, else deformity will be the result, particularly in elderly people.

Dr. Wathen (closing): Of all the fractures occurring in the body, usually the easiest to diagnose is Colles', but I exhibited these pictures to show that especially in fleshy people we are liable to make mistakes without the use of the X-rays. The treatment in these cases was along the line of that of the regular Colles' Fracture. I approximated the bones as well as possible, and set the fracture under the X-ray, using the fluoroscope. It is best to use the radiograph for detecting a fracture, and then it is quite easy to set under a bandage with a high tube.

The pictures I exhibit are all from my own practice, for I never exhibit those seen in consultation. When a patient is sent to me I never let him see the result, but make my report to the doctor, and let him take the responsibility of showing the picture.

The epiphyseal line shows beautifully in the case of the boy, and could never be taken for a fracture, as the styloid processes are absent in the young. There is no excuse for making such mistake in these patients.

Essay by Dr. F. W. Samuel, "Cancer of the Breast," will appear under Original Articles of this issue.

Dr. H. N. Leavell: I wish to bear out the statement with regard to the lateness at which these patients present themselves. The most malignant cases I have ever seen have been these neglected ones. There can be no doubt that many cases are improperly diagnosed and some are left alone because they do not involve life, but I believe every tumor of the breast of every character should be removed, if it can be demonstrated that it is cancerous, then the axillary glands should be entirely cleaned out. The operation for cancer of the breast should be a radical one at all times. These growths extend by the lymph glands, and unless these are removed their recurrence is extremely likely.

Dr. J. A. Flexner: I want to thank Dr. Samuel especially for the absence of X-ray suggestions and references to radium. I have seen nothing but distress result from temporizing. An interesting point to me is the attempt to make the differential diagnosis between these growths before removal. I have seen very few breasts removed where there could be any question as to the wisdom of it. Rapidly growing hard tumors, especially when they have a tendency to become attached to the skin, should come out.

Dr. T. P. Satterwhite: Fortunately, the majority of tumors of the breast are non-malignant; but no matter what kind of tumor it is, for the peace of mind of the patient and other reasons, it should be removed. If it is malignant, by the time palpation can reveal its presence and identity, the work has been done. It has been my misfortune to find these tumors recur. I have removed the growth, cleaned out the axilla, taken out the pectoralis muscle, and still it has recurred.

Dr. Ewing Marshall: I would be glad for Dr. Samuel to speak of the technique of the closure of the wound; also as to the desirability of removing everything in the shape of excrescences around the nipple.

Dr. M. K. Allen: I recall one case of cancer of the breast removed eighteen years ago. She was never a vigorous woman, but she has been in better health since the operation than ever before.

Dr. John B. Wathen: I take issue with the statement that the majority of tumors of the breast are benign. Dr. Senn has proven that over 80 per cent. are malignant or will become so. I endorse the method of removal advocated in the essay, which was introduced by Halstead. My experience with nine cases leads me to believe that we should remove the pectoralis major and minor muscles also. All of these patients are living in this city to-day, some having been operated upon as long as five years.

Halstead shows that recurrence generally takes place, not in the muscular or skin tissue, but in the mediastinum, and later German authorities have advised opening up this space and removing the glands.

I think the X-ray has much to offer in the line of relief, but I think the tumor should be first removed by the Halstead method, and then a trial of the X-ray be made in the effort to reach these deep glands with a high tube. Radium does not begin to have the value of the X-ray for this purpose.

Dr. Sam Brown Hays: It was to me a matter of extreme interest to watch one of these tumors, and I noticed its size immediately after excision and studied the section closely. Her age and other circumstances seemed to be quite a deviation from the average, and I look on the condition as rare, as a rule.

Dr. A. David Willmoth: I was present at the operation in one of these cases. I think the treatment advocated is the only correct one, for it has been proven that the glands are involved long before any enlargement takes place. It is strange that these cases do not come to the physician earlier, for it is generally known among the laity that the majority of tumors of the breast are malignant. Their delay may be due to the timidity of the patient and the feeling that they will recur after operation. I think we should educate people to have these growths examined early in order to give the surgeon a chance.

Dr. J. W. Irwin, President: There was a time when I had something to do with surgical diseases, and Dr. Allen has mentioned a case in which I removed the growth eighteen years ago. The patient had consulted two eminent surgeons, one of whom was Dr. Vandell, and they advised against operation. The case came under my care, and a microscopic examination proved the growth to be cancerous. I cut in between the ribs, after removing the tumor, took out all the glands and went under the pectoral muscle, and found I had an opening of eighty square inches. Skin grafting was carried out, and the patient has had no trouble since.

Of late years when I see a tumor about the breast, I look upon it with suspicion. I do not believe in the transmigration of tumors any more than in the transmigration of souls. The tumor is either cancerous from the beginning or not at all. Whether the germs or parasites enter through the veins or lymphatics, I am inclined to look upon cancer as contagious or infectious. When a woman strikes her breast against the corner of a table and bruises and abrades the skin, and a

little tumor appears, may not the seeds of cancer have entered at first?

The woman from whom I removed the cancerous growth alluded to had been troubled with it for two years, and was nearly cachectic. There was an open sore about as large as my hand where she had been burned by paste that had been applied by a cancer curer.

Dr. Samuel (closing): As to the closing of the skin incision, in carcinoma of the breast not involving the skin, usually enough skin can be gotten from the lower and outer border to cover with. Where this is impossible, I cut the skin on either side as far as the sternum, dissecting it up and sliding it forward. In two cases I have transplanted skin from the belly. The part of the body from which the pedicle is taken can be brought almost entirely together.

The ordinary incision used by Halstead began almost at the shoulder joint at the insertion of the pectoralis major muscle, and surrounds the gland in a curve, and is then brought back to meet the original incision. I used to remove the fat and breast along the muscle, and then search for other involvement, but of late I make the incision just as most operators do. On account of the easy access to the axilla and to control the vessels I make the incision and cut it with a pair of scissors and pull it back. By leaving the muscle and breast gland all attached you have no blood supply to control, and then you clean out the axilla, disregarding all small nerves and vessels. As soon as possible I find the axillary artery with my finger; at the lower border of the flap one little artery is cut, which bleeds a little. If the axillary glands are involved, though they are not enlarged, do a complete operation. It is just as well to take off the pectoralis muscle down to the ribs, taking out all fat and fascia of axilla. Whenever the axillary glands are enlarged success is problematical, no matter how thoroughly we clean them out. Those that Halstead thought unusually well selected for operation came back to him with local or regnary recurrence.

As to the excrescences about the nipple, I do not know that they should always be removed but they should be looked upon with suspicion. There is a condition known as Pagett's Disease, which is regarded as a pre-cancerous condition, and the removal of the breast is advocated.

There are tumors of the breast that are not malignant. I have removed a few that have not returned, but I believe the majority of tumors of the breast prove to be malignant in the end.

In regard to Dr. Irwin's case, we have an uncommon class of tumors of the breast known as atrophic (possibly adeno-carcinoma),

and these may exist for a long time. A woman may live for twenty years and they dry up, and are accounted perfect cures. It rather discredits the theory that extensive operations benefit cancerous patients. In Dr. Irwin's case an extensive operation was done, but since it had existed for two years, and she was markedly cachectic, is remarkable, it may have been of the atrophic class. My experience has been that a woman with cachexia never gets well, for cachexia means metastitis. The quack may have caused the ulceration by infecting it. It is a fact that some cancers may be cured by cauterization. That condition known as rodent ulcer is one the X-ray men lay special stress on, but the disease frequently returns. It is also admitted that a number of cases of carcinoma of the skin have followed X-ray burns. In early cases which do not present typical symptoms, extensive operation in the beginning must be the rule.

I recall a case I saw with Dr. Satterwhite in one of the loveliest women of Louisville. She had a typical cancer and typical malignant odema of the arm. He removed numbers of large nodules from the axilla, but a complete operation was impossible.

Dr. Ewing Marshall: I wish to read the following extract from the report of the Home for Friendless Women:

PHYSICIAN'S REPORT.

The following brief report is submitted of the work of the medical staff during the past year:

The staff has responded to the many calls upon them with the usual self-sacrifice which characterized their work heretofore:

Births	13
Deaths, infants	5
Deaths, adults	1

One mother suffered a complete laceration of the perineum, which was immediately sutured with partial success, a secondary perineorrhaphy being successful. Four abscesses were lanced, and two operations were done upon mothers, one for radical cure of an abdominal hernia resulting from an early abdominal section, the other the removal of a tumor from the shoulder.

There were two cases of puerperal sepsis and a number of cases of whooping cough. Twenty-seven of the inmates were vaccinated. The health of the inmates at present is excellent.

DR. HENRY E. TULEY,
Secretary of Medical Staff.

I have been connected with this institution for fourteen years. In that

time we have had but one death in the lying-in room, and that patient had erysipelas before going into labor, and was neglected by the physician attending her at the time. The institution is more a reclaiming home than a hospital, but we do any kind of work that comes up, and our success has been phenomenal. We have all kinds of patients, and I have delivered girls under fifteen years of age. Many of them come from the mountains, and as a rule have been seduced by an uncle or cousin, sometimes a brother.

I bring the matter before the Society because I have heard remarks made by the profession to the effect that it is a home for resting-up prostitutes. The records go to show that a great many of the women have married the men who seduced them, and others have married after telling their lovers their history. I think the institution should receive the commendation of the profession. It has always amused me to hear such reports as those of Dr. Price, saying that they have but from 2 to 10 per cent. of deaths in their lying-in institutions, while this institution, dependent upon charity, has had but one death in fifteen years, and that patient had erysipelas beforehand.

Dr. M. K. Allen presented the mortality statistics from the Health Office.

The following is a report of the cases and deaths from contagious and infectious diseases reported to the Health Office during the month of December, 1903:

CASES.		DEATHS.	
Scarlet fever	15	Scarlet fever	0
Diphtheria	49	Diphtheria	5
Whooping Cough	0	Whooping Cough	0
Typhoid fever	6	Typhoid fever	8
Tuberculosis	15	Tuberculosis	58
Small-pox	10	Small-pox	3

Cases reported January, 1904:

CASES.		DEATHS.	
Scarlet fever	17	Scarlet fever	1
Diphtheria	37	Diphtheria	6
Whooping Cough	0	Whooping Cough	0
Typhoid fever	5	Typhoid fever	7
Tuberculosis	5	Tuberculosis	50
Small-pox	20	Small-pox	4

Cases reported February, 1904, to date February 22 :

CASES.		DEATHS.	
Scarlet fever.....	17	Scarlet fever.....	0
Diphtheria.....	22	Diphtheria.....	0
Whooping Cough.....	0	Whooping Cough.....	0
Typhoid fever.....	12	Typhoid fever.....	10
Tuberculosis.....	17	Tuberculosis.....	31
Small-pox.....	25	Small-pox.....	0

Diphtheria mortality is greatly on the decrease, and is undoubtedly due to an unlimited supply of antitoxin, although its entire acceptance by the profession is not recognized as yet. Typhoid and pulmonary tuberculosis cases are not reported regularly, hence the rate above stated can not be conclusive as to the mortality.

Adjournment.

TRIMBLE COUNTY MEDICAL SOCIETY.

The Trimble County Medical Society held its regular meeting at Bedford, Trimble county, Ky., on Monday, February 15th, C. P. Harwood presiding.

Only a few members were present because of the bad weather.

Dr. W. Mahan, of Bedford, reported a case of Jacksonian epilepsy.

The bill reported to the Legislature by Dr. McCormack, Secretary of the State Board of Health, was unanimously and warmly indorsed.

The officers elected at the January meeting to serve for this current year were :

President—Dr. C. P. Harwood, of Milton.

Vice President—Dr. J. K. Fisher, of Bedford.

Secretary—Dr. L. G. Contri, of Winona.

Censors—Dr. W. Wrigs, of Corn Creek ; Dr. Geo. Gains, of Milton ; Dr. J. Calvert, of Milton.

Society meets the third Monday of every month.

L. G. CONTRI, Secretary.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. BUSKIN.

Original Articles.

THE PRESENT STATE OF RADIO-THERAPY.*

BY J. R. WATHEN, A.B., M.D.

*Professor of Surgery in Kentucky of Medicine; Surgeon to St. Anthony's Hospital, Louisville, Ky.
City Hospital and Kentucky School of Medicine Hospital, Louisville, Ky.*

The subject of radio-therapy is one upon which much has been written of late by its enthusiasts, and we are now coming to a state where we can formulate our views as to its usefulness, based upon the immense experimental and clinical data collected.

Like all new remedies in the past, when first introduced and found beneficial in selected cases, these agents have been tried for almost all the ailments that flesh is heir to. Radio-therapy has its limitations the same as all other remedial agents, and we should select our cases for treatment as we do in other lines of therapeutics. The first of these light treatments or radio-therapeutic agents to attract attention was the Roentgen ray, discovered in 1895, by Prof. Roentgen, of Wurzburg, Bavaria, while experimenting with Crook's tubes and studying light phenomena. This was followed, in 1896, by the Becquerell rays. In 1901 Finsen, of Copenhagen, Denmark, reported his results with the light treatment of lupus. In 1903 Mme. Curie, of Paris, published her researches with radio-active substances and the discovery of radium.

All of these new remedies are based on the same principal, i. e., they consist of the ultra violet light band, of the spectrum of white light. White light, when broken up into its component parts

by means of a prism, makes a characteristic spectrum of different colors like the rainbow.

The spectrum is very much wider than the original beam of light, and consists of a series of differently colored bands of light, of which the first is a red band, the next an orange, a yellow, a green, a blue, an indigo, and the last a violet. Stokes has shown that when the spectrum is allowed to fall on certain substances a band of colored rays, called the ultra violet rays, becomes visible beyond the violet band which is ordinarily seen.

The most active band of the spectrum is the ultra violet and the weakest the red. This latter fact is taken advantage of by photographers to develop sensitized plates. All light affects the plates, but the orange or yellow-red the least, and the violet or ultra violet the most. The ultra violet light has the power of penetrating certain substances, and of producing reactions in tissues, the strength of this light depending upon the apparatus and method of generation.

Finsen's method was to concentrate the sun's rays by means of large lenses and prisms, and absorb the heat from violet rays by a filter of ammonia-sulphate of copper solution. Later he substituted the electric arc light for sunlight and quartz glass in employing the ultra violet light.

Improvements have been constantly added to this method, so that at present we have many types of comparatively cheap, simple and much more powerful Finsen apparatus than was at first produced by the originator of this treatment.

The new element, radium, is found in very small quantities in a mineral called pitch blende, the ore from which the rare metal uranium is obtained; the richest pitch blende contains only about three grains of radium to the ton.

The salts of radium, especially the bromide, are used in medicine, as the metal itself is unstable in air.

Three kinds of rays or emanations are given off from the bromide of radium called the alpha, beta and gamma, the first constituting the largest part of the radiation.

The rays of radium are not suited to making radiographs, and it has been estimated by Williams that it takes thirty thousand times as long to make a radiograph through a thin substance as it does with the X-rays. However, radium is well suited for treating superficial growths, and while far slower than the Roentgen rays it possesses the advantage of being placed in inaccessible cavities, easily transported,

and requires no generating apparatus as electricity. The bromide of radium is used in medicine in 10 milligram amounts of the good one actively. This salt is encased in an aluminum box, which is transparent to the rays and preserved, when not in use, in a lead receptacle.

The method of employment of radium is to fasten the small aluminum box containing the salt into a lead cup or holder, and place it a short distance, usually about one-half to one inch, from the part to be treated. Daily applications of ten minutes each produce a redness of the tissue and a reaction very similar to the X-ray, only much slower.

Numerous other light treatments are to-day included under the title of radio-therapy, but the most powerful, quickest and most generally used is without doubt the Roentgen ray, and I will devote the rest of my paper to the consideration of its technique and effects upon the tissues.

These rays are generated in glass tubes, the air of which having been partially exhausted, when electric currents of high polarization is passed through them from an aluminium disc called the cathode to a platinum disc, the anode.

A yellowish green color is produced on the glass surface, forming a hemisphere, the base of which is parallel to the surface of the anode. The exciting current for these tubes may be generated from a static machine or an induction coil, some operators preferring one or the other, and the writer, having used both, believes that good work can be done with either.

Williams gives a table showing the advantages and disadvantages of each. Static machine—Advantages are: Perfectly steady light, tubes of greater ranges of resistance, light excellent for fluoroscopic work, and independent of electric main. Disadvantages are: Very susceptible to moisture, longer exposure needed for photographic work, and a large one more expensive than a coil.

Coil—Advantages are: Not affected by moisture, shorter exposure needed, more powerful for money expended, and occupies less space. Disadvantages are: If a static machine is used, it must be one which will stand continuous usage with little wear, and should be operated by an electric motor with speed controller.

Induction coils should be of at least 10 to 12 inches spark-producing capacity in order not to overtax them by long continued usage. The only interrupters which have been found to be especially adapted to this continuous operation are, in the opinion of the writer, of the

mercury turbine type. A protective tube shield is a great aid in treating your cases, as it allows the rays to be directed only on the diseased parts, is not a clumsy contrivance, and, furthermore, protects the operator.

Your tubes should be made with devices to regulate the vacuum, or with a large platinum anode to absorb the heat generated by the long exposures. The patient is best treated while lying upon a physician's office table, and occasionally the diseased areas can be further protected with thin lead foil about 1-50 of an inch in thickness, but this latter precaution is rarely needed when the tube shield is used. For the treatment of deep-seated structures, as glands, etc., it is now conceded that the high vacuum tube is essential, while for superficial or skin lesions a low tube is much preferable.

The frequency of exposure is still a mooted question, some advising to expose a patient to the rays once or twice a week, while others say once every day.

The duration of each exposure also is variable, and depends upon the character of the disease, the kind of tube used, high or low, and the distance placed from the area under treatment.

The dosage, or the extent to which the rays are used, also greatly varies, depending upon whether the disease is superficial or deep, malignant or benign.

As a general rule the writer selects a tube suited to the case, *i. e.*, a high vacuum for deep structures and a low vacuum for superficial, and exposes ten minutes each day until a reaction in the skin appears, and then awaits its subsidence before further appliances are made, if needed. At present all our methods of accurately measuring the amount of rays used are imperfect, or only approximately correct.

Each operator should become familiar with his apparatus, and as near as possible repeat the successive treatments in as near the same dosage to arrive at definite conclusions. The length of parallel spark-gap, the penetration of the rays on test screens, the voltage and amperage used are all of value, but we must not forget to take into consideration the number of spark-gaps used and many other minor conditions which may enter into our estimate of the strength of our rays. Various operators have published their individual technique, but it is hard to follow a fixed rule, as cases and conditions of necessity vary greatly, and we are compelled to use our best judgment as to what we should employ.

The effects of the X-rays upon normal skin after a number of

exposures are to produce a slight pigmentation, erythema, blanching or loosening of the hairs and a dryness of with a smooth glazed surface. This condition very much resembles a sunburn, and many authorities object to the term burn being used, but nevertheless a condition produced by light is as much a true burn as one produced by heat, as Pusey has noted. As in burns we may divide the dermatitis into four stages: the first represents a dry dermatitis with erythema; the second a dermatitis with the formation of vesicles and blebs; the third a destruction of the epidermis, and the fourth or last involves not only the epidermis, but the corium and possibly the underlying tissues.

Scholtz, (Pusey and Caldwell) have observed the following histological changes in normal skin when acted upon by the X-rays.

1. "X-rays influence especially or exclusively the cellular elements of the skin. These are influenced primarily, and undergo a slow degeneration, while the connective tissue, the elastic tissue, the musculature and cartilage are changed only in a slight degree, and suffer only secondarily, as a result of the cellular degeneration and the inflammatory reaction consequent to it."

2. "The degeneration effects the epithelial cells in the highest degree, and to a less extent the cells of the glands, the vessels, the muscular tissue and the connective tissue."

3. "The degenerative appearances are of various kinds, and effect both the protoplasm and nuclei."

4. "As soon as the degeneration of the cells has reached a certain point an inflammatory reaction appears, which manifests itself in a marked dilation of the vessels, with gathering leucocytes and marked emigration of the blood corpuscles. When greater cell degeneration occurs as a result of stronger exposure, collections of leucocytes press into a mass of degenerated cells and accomplish their further destruction."

5. "The changes in the large and small vessels are apparently of great importance as affects the further development and slow healing of the ulcerations."

Pusey (Pusey and Caldwell) says: "The changes seen in pathological tissues under X-ray treatment present the same characteristics as those seen in healthy tissues exposed to X-rays. There is first evidence of stimulation of certain intra-cellular processes, and later degeneration and absorption of the diseased tissues, the whole accompanied by an inflammatory reaction, which first aids in the destruction of the degenerating tissue and then in its replacement with healthy

connective tissue. Accompanying the whole process are the characteristic changes in the blood vessels."

"The especially significant feature is the degeneration and disappearance of pathological tissues under X-ray effects which are not sufficiently intense to destroy the healthy stroma."

"This is evidently the keynote to the use of X-rays in the treatment of certain diseases, the morbid products of which must be disposed of in order to get relief; a reaction produced sufficient to cause destruction of the diseased tissues which constitute the pathological process, but not sufficient to destroy the surrounding healthy tissue."

Based on the above conclusions, what, then, are the indications for the therapeutic application of the X-rays?

The experience of our leading men in this field of work seems to prove that this remedy is of real value as a therapeutic agent only in those diseases which are comparatively superficial, and we can seldom expect much real improvement in deep seated diseases, as cancer of the stomach, liver or uterus.

The most suitable cases for X-ray treatment are epithelioma of the skin, lupus, enlarged glands, both tubercular and Hodgkin's Disease, certain types of eczema, removal of superfluous hairs, and many other superficial lesions amenable to this agent.

Some authors claim to have benefited deep seated organs, as the stomach, lungs, etc., but their reports are not encouraging.

Its anodyne effects are well known, and this latter quality is its only endorsement in certain hopeless cases.

Roswell Park (*Medical News*, May 30, 1903) says concerning the X-rays:

1. "They afford methods of treatment for extremely new growths of limited area and superficial character, which, while not exactly certain, are extremely promising."

2. "They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way."

3. "They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed or unoperable cases than does any other method of treatment."

4. "It will be found that the odor of putrefaction may often be suppressed by their use, and the putrefactive process itself checked."

5. "Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost certainly avoided."

6. "More than this, they afford a supplementary method of

treatment after operation by which the benefits of the same may be enhanced and enlarged."

7. "It is not necessary to intermit such work as the patient may be engaged in in order to carry out the X-ray or photo-therapeutic method of treatment. One of the most comforting aspects of their use is the relief from pain which they afford, even when this pain is deep seated and of uncertain origin."

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LOUISVILLE, KY.

SOME OBSERVATIONS IN TREATING ACUTE MORPHINE POISONING,*

BY ARTHUR KIPP, M.D.

Resident Physician in the Louisville City Hospital.

Upon request to write a paper upon some important topic and one that should be well known as far as a common condition to treat, it behooves me to take the subject of the cause of death in acute morphine poisoning. And as the treatment of such a condition should be very conservative, great pleasure is taken to enumerate some observations along that line, and show the difference of opinion of some of the best authors, and that of those that have had a different experience and found the cause of death different from the former observers in that failure of the heart superseded the respiratory failure and was not dependent on cessation of the respiratory function, but of cardiac asthenia as a result of exhaustion.

It is well now to show the line of treatment used in cases of acute poisoning, which have had the benefit of all the emergency measures, viz.: Upon ambulance call a case room is rapidly prepared with stomach tube, permanganate of potash solution, 1-2000; stimulants, hypodermatic syringe for the administration of the same; wet towels for flagellation; ice packs; hot coffee and rectal tube for its injection, Trendelenberg apparatus for that position, bed-table, and those general measures that all are familiar with. So that when a case is announced

*Written especially for THE AMERICAN PRACTITIONER AND NEWS.

rapid preparations are made, and the chance for extensive absorption of the drug is greatly lessened.

As soon as the salient symptoms are recognized as those of acute morphine poisoning a hypodermatic injection of : strychnine, gr. 1-15 ; caffeine cit., gr. iii., and 1-75 of atropia are given, stomach washed out with a 1-2000 permanganate of potash solution, and notice taken as to whether the solution is oxydized or not. Also a hypodermatic injection of permanganate of potash, gr. ii., are given, and then it is noted whether the patient has recovered to any extent or not. Of course this treatment is of most avail in the mild cases, such as the poisoning from doses of one to five grains, but when five to ten or more have been taken a repetition is most always necessary, and in the majority of cases have to be cautiously repeated several times. As stimulants strychnine and caffeine are most used, as also hot coffee per rectum. Ice introduced into the rectum, alternated with the coffee, is of benefit. Artificial respiration, when necessary, and a sometimes practice of flagellation, and occasionally over the heart, has been used, but generally discarded, as disastrous, or believed to be disastrous, results have been noted.

The Faradic current has been used to quite an effect by attaching one pole to the spring mattress of a hospital bed, covered only by a wet sheet ; the patient is placed on this, and the indifferent pole is played over the patient's body, and tends to keep him or her awake without much exertion or fatigue. This does away with the exhaustion of walking and is only used in the treatment of those recovering from the poisoning.

Six cases that died (four under my care) all died of cardiac failure, which is contrary to the teaching of Butler, Potter, Culbreth, etc., who all say that death ensues from the direct action on the respiratory center in the medulla oblongata. In the six above cases all were breathing at the rate of 16 to 18 per minute, and doing fairly well when there occurred a sudden cardiac acceleration and subsequent stoppage. In one case flagellation over the heart and in two other ones, the exhaustion of walking caused, it is believed, the heart failure. Therefore, walking and flagellation in patients poisoned by doses exceeding five grains should not be practiced. It is not improbable, though, that the cardiac asthenia sometimes may be due to a process of carbonization from deficient oxygenation caused by the diminished respiration, whether from depth or number of the breaths taken, contributing to the general depression or exhaustion from walking or any other tiring measures.

LOUISVILLE, KY.

—Progress—
of
Medical and Surgical Science.

Treatment of Pneumonia.—Dr. Gilman W. Thompson, in a recent issue of *The Journal of the American Medical Association*, states that in a disease so prevalent and so serious as pneumonia is at the present time, it is helpful to compare our personal experience in coping with it, even though there be no new methods of treatment to advocate, it is well to revise existing methods, if only for the sake of endorsement or confirmation. He says that however diverse the methods of treatment they all have the same aim, to maintain the efficiency of the heart through a brief period of self-limited infection, in which it is subjected to an unusual strain. He deems it wise to use aconite in the asthenic cases for the first twenty-four or thirty-six hours, but no longer; for as soon as the heart's action becomes less tumultuous it is best to avoid interference, and wait for the first evidence of heart exhaustion.

That a fagging condition of the heart should be recognized and combated with strychnia, nitroglycerine or digitalis hypodermatically, and it is best to avoid stimulating the heart early in the disease; that temperature should be dealt with as cautiously as in typhoid fever; that only in hyperpyrexia should we resort to hydrotherapy, especially the cold wet pack; that temperature of 103° can be controlled with an alcohol sponge, and that he is not in favor of the cold bath tub, and lays special stress on the uselessness of specifics and of the little value of expectorants. He recommends the use of alcohol in some cases, but not in the amount that was formerly prescribed; that many patients do best without it, but with a feeble and dicrotic pulse, a dry tongue and a profoundly asthenic condition, it is best to give it to the extent of four or five ounces in twenty-four hours in the form of whisky or brandy. To the aged that alcohol should be given early, in moderate doses, and also to alcoholic subjects. In speaking of the gastrointestinal tract, he says that tympanites in pneumonia is as much to be dreaded as in typhoid fever, and that the initial dose of calomel

should not be omitted, and the bowels should be kept active with non-effervescing doses of saline. The diet should be carefully looked after, and that a concentrated, easily digested liquid or a predigested diet should be given.

Dr. Thompson lays stress on the value of hypodermoclysis in some cases, that when the respiration is shallow, intermittent and irregular, cyanosis is extreme, the pulse scarcely perceptible, and there is coma and complete asthenia, hypodermic injection of 1000 cc of hot normal saline solution will sometimes produce a surprising response, and enable the patient to rally for an hour or two, when the injection should be repeated, and that the rectal injection of salt solution will also prove of service.

That local applications are practically of no value except to control pleuritic pain, and that the poultices, etc., contribute to the patient's uncomfortableness, and should be dispensed with.

Dr. Thompson reminds us of the importance of rest, and that we are all too over-zealous in the treatment of pneumonia, that we have a tendency to over stimulate the heart, to over use expectorants; that it takes courage and much experience not to overdo in the treatment of pneumonia. There is no other disease in which the idea for combat against the elements of death presents so active and intense a clinical picture. The picture changes from hour to hour, and the time of combat is brief, and no matter how severe the odds against life may appear there is always a chance—"what one terms a fighting chance"—up to the patient's very last breath. Hence the temptation for active interference may outweigh the calmer judgment and the patient may lose through exhaustion that modicum of strength which might at the last moment have turned the balance in his favor. An hour's sleep will often do more towards saving a patient's life than all the medication throughout the disease, and there are times when it should be remembered that "they also serve who stand and wait."

The Therapeutics of Glycogen.—J. de Nittis, M.D., Paris, in an original communication in *The Medical Bulletin*, March, 1904, gives us the results of his and others' investigations of glycogen, which can be seen enumerated in the following:

1. Glycogen is most abundant in young and robust subjects and the quantity present is in itself a comparative indication of vitality.
2. In old people and invalids the quantity present in proportion to the body weight is reduced.
3. In the struggle against microbic invasion the resistance is

directly proportional to the glycogen of the organism.

4. Glycogen is distinctly a cardiac stimulant.

5. It assists the very rapid healing of wounds.

6. Glycogen is an antitoxin, as experiments have shown very clearly in cases of poisoning with nicotine and atropine (Tessier, *Société de Biologie de Paris*.)

He reports cases of typhoid fever, infectious influenza, tuberculosis, etc., treated by it, in which a marked amelioration of the symptoms was evident in a comparatively short time, and believes it materially aids either the power or number of the phagocytes.

The Condition of the Blood in Patients Suffering from Pulmonary Tuberculosis.—The paper of J. M. Swan is the result of a study of twenty-five cases of the disease and discusses the question in great detail. The author's conclusions may be summarized as follows: (1) The blood picture in pulmonary tuberculosis is by no means constant. (2) The average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hemoglobin, and about a normal number of leucocytes. The average case in the second stage presents a varying degree of leucocytosis, due to an increase in the number of polymorphonuclear, neutrophile cells. The erythrocytes are present in about normal numbers and the hemoglobin is often normal in percentage. The average case in the third stage will show a reduction in the number of erythrocytes, a moderate leucocytosis composed of the polymorphonuclear, neutrophile cells and a high hemoglobin percentage. (3) Hemorrhage is usually followed by a marked reduction in hemoglobin, a slight reduction in the number of erythrocytes. Leucocytosis is not an invariable feature of a post-hemorrhagic blood. (4) Albuminuria of itself appears to cause no constant change in the blood picture. (5) Tuberculous diarrhea is apparently attended by a reduction of the number of the erythrocytes and of the percentage of hemoglobin, and by an increase of the leucocytes. The latter increase is due to the polymorphonuclear, neutrophile cells. (6) Pleurisy is usually accompanied by a polymorphonuclear, neutrophile leucocytosis. (7) There is no distinctive blood picture that will serve to differentiate between extensive cavity formation due to tuberculous degeneration and that due to other causes. Further, leucocytosis is not a constant feature of cavity formation. (8) The leucocytosis occurring in the course of pulmonary tuberculosis is due to an increase of the polymorphonuclear elements, and not to an increase of the lymphocytes or of the transitional cells. (9) The absence of the eosinophile cell from the blood may be looked on as

an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.—*Medical Record*.

Some Reasons for Preferring Ether for Anesthesia.—Williams (*American Journal of Obstetrics and Diseases of Women and Children*) gives the following seven reasons why he prefers ether to any other anesthetic. He reports good results in his hands :

1. It is always or nearly always possible to procure a fresh supply. This is not so with chloroform, as that made for anesthesia is not kept by all druggists, a prescription for this drug being filled by the commercial article, which, of course, is totally unfit for anesthesia. Only a day or two ago I heard of a patient who was operated upon after being put under the influence of spirits of chloroform.

2. So far as statistics go ether is the safer, about one death occurring in ten thousand cases ; chloroform one in two thousand. The educated public know this and frequently request that chloroform shall not be used. Personally, I do not think that this gives the relative safety in competent hands.

3. The patient can be placed under ether nearly and in a good number of cases, quite as easily, quickly and quietly as with chloroform. In point of fact, I have etherized a patient in exactly ten seconds, he, taking only five inspirations. This was a strong, robust young man, who was to be operated upon for hernia. The anesthetic was administered by fitting over the nose and mouth a rubber mask connected to the ether bottle by a tube, the bottle being plunged into boiling water a few seconds previous to beginning the administration. Leaving out the element of speed, this method has nothing to recommend it.

4. With ether you can keep the patient in pretty much the stage desired ; with chloroform I have seen them go quickly from sensation of pain to deep narcosis.

5. When we are compelled to place the anesthesia in the hands of a layman, or, as has been done, the domestic servant, I believe ether is safer than chloroform. The latter is likely to kill early, during the first few inspirations or when struggling occurs—just the time when one not familiar with the vapor would crowd the anesthetic. This point, no doubt, will be disputed.

6. When organic heart disease is present ether, for a time, stimulates the heart. I have repeatedly seen patients leave the table in a better cardiac condition than before the operation.

7. I have administered ether to alcoholics, those with pulmonary tuberculosis and with pathological kidneys, and believe it is as safe as any general anesthetic, if not safer.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

A great many cities' health reports are showing an increasing mortality of pneumonia, whereas pulmonary tuberculosis is on the slight decrease. Great pleasure is taken in calling attention to such conservatism as that of Dr. Gilman Thompson, as elaborated by him in a paper in *The Journal of the American Medical Association*, March, 1904, on the treatment of pneumonia and Trudeau's post-mortem findings, which interest us very much, and, to repeat, that 60 per cent. of his autopsies showed healed lesions of pulmonary tuberculosis, some intercurrent disease or accident causing the demise of the subjects found in his statistics. Certain it is, that the majority of the cases of tuberculosis is benefited even by hygienic and climatic conditions, and to-day it is generally believed to be preventable. These recent reports are gratifying in this disease, and the recent therapeutic advances have undoubtedly contributed to the decrease of mortality.

Book Reviews.

PROGRESSIVE MEDICINE, VOL. II., June, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. 438 pages. Illustrated. Philadelphia and New York : Lea Bros. & Co.

The subjects dealt with in this volume are: "Surgery of the Abdomen, including Hernia," by William B. Coley, M.D. The writer takes up hernia, surgery of the stomach, intestines, rectum, liver and biliary passage and that of the genito-urinary organs. "Gynecology," by John Clark, M.D. Diseases of the uterus, including displacements, diseases of the genito-urinary system, inflammations of the pelvic viscera, extra uterine pregnancy, and post operative thrombophlebitis. "Diseases of the Blood and Ductless Glands, the Hemorrhagic and Metabolic Diseases," by Alfred Stengel, M.D. In this the writer goes into the detail of the changes that take place in the blood in certain diseases, and gives the reader the full description of how these may be demonstrated by him in his own laboratory. "Ophthalmology," by Edward Jackson, M.D. In this article there is a brief resume of the advances that have been made in this field of work on every trouble that we have to deal with in this region, also a brief article on injuries to the eye by foreign bodies, which should be read by every physician, whether he be a specialist or not.

PROGRESSIVE MEDICINE, VOL. III., September, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. 398 pages. Illustrated. Philadelphia and New York : Lea Bros. & Co.

The subjects dealt with in this volume are: "Diseases of the Thorax and Its Viscera, including the Heart, Lungs and Blood Vessels," by William Ewart, M.D., F.R.C.P.; "Dermatology and Syphilis," by William S. Gottheil, M.D.; "Diseases of the Nervous System," by William G. Spiller, M.D., and "Obstetrics," by Richard C. Norris, M.D.

In this work there is so much excellent reading matter that it is hard for the reader to select any one part, but the article on "Obstetrics"

alone is worth the price of the book, and the entire book can not be fully appreciated until it has been read.

PROGRESSIVE MEDICINE, VOL. IV., December, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. 398 pages. Illustrated. Philadelphia and New York : Lea Bros. & Co.

The subjects dealt with in this volume are : " Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum," by J. C. Hemmeter, M.D. ; " Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics," by Joseph G. Bloodgood ; " Genito-Urinary Diseases," by William T. Belfield ; " Diseases of the Kidneys," by John Rose Bradford ; " Physiology," by Albert P. Brubaker ; " Hygiene," by Charles Harrington ; " Practical Therapeutic Referendum," by H. R. M. Landis.

This volume completed the 1903 series, and makes one of the best reference works that the busy practitioner can have at his command, the material is excellently arranged and presented, and the pages are very agreeable to the eye. The work comprises the better part of recent literature relating to the subjects set forth. It gives the doctor the cream of all that has been done in the way of advancement in medical and surgical science, and saves him the trouble of having to consult numerous journals ; in fact, the work stands in a field to itself, and we note with pleasure the reduction in price from \$10 to \$6, which brings the work in the reach of all, and every doctor should avail himself of the opportunity to get this most excellent work at so low a price.

HOWE'S HANDBOOK OF PARLIAMENTARY USAGE. New York : Hinds & Noble, publishers, 1904.

We find this little \$0.50 handbook a convenient ready reference manual for all those who care not to be without the proper data on the spur of the moment. It will be found extremely useful at society meetings, its scope wide, and can be found thoroughly practical.

BOOKS RECEIVED.

A NON-SURGICAL TREATISE ON DISEASES OF THE PROSTATE GLAND

AND ADNEXA.—By George Whitfield Overall, A.B., M.D., formerly Professor of Physiology in the Memphis Hospital Medical College. Chicago: Rowe Publishing Company.

THE SYSTEMATIC USE OF CYLINDERS IN MAKING THE SHADOW TEST.—Alexander Duane, M.D., New York.

THE PRINCIPLES OF OBSTETRICS. A Medical Manual for the Student and General Practitioner.—By Stanley Perkins Warren, M.D., Obstetric Surgeon to Maine General Hospital, Consulting Physician to the Maine Eye and Ear Infirmary. New York: William Wood & Co., 1903.

PHILADELPHIA HOSPITAL REPORTS, Vol. V., 1903.—Edited by Herman B. Allyn, M.D.

INFECTION AND IMMUNITY, WITH SPECIAL REFERENCE TO THE PREVENTION OF INFECTIOUS DISEASES.—By George M. Sternberg, M.D., LL.D., Surgeon-General U. S. Army (retired); ex-President American Medical Association and of the American Public Health Association; Honorary member of the Epidemiology Society of London.

INFANT FEEDING.—By Louis Fisher, M.D. Third edition. Philadelphia: F. A. Davis Co. publishers, 1904. Price \$2.00 net.

DE L'ACIDE CAMPHORIQUE COMME PROPHYLACTIQUE DE LA FIEVRE URINAIRE.—Par le Dr. Albert Fruedenberg (de Berlin).

DE LA STERILISATION Des Sondes PAR LA VAPEUR AND DE LEUR CONSERVATION STERILE.—Dr. Albert Freudenberg (de Berlin).

DISEASES OF THE INTESTINES, a text book for practitioners and students of medicines.—By Max Einhorn, M.D. Second revised edition. New York: Wm. Wood & Co., 1904.

FLATULENCE, METEORISM AND TYMPANITES, a reprint.—By Charles D. Aaron, M.D., Detroit, Mich.

THE MAN WHO PLEASES AND THE WOMAN WHO CHARMS.—By John A. Cone. New York: Hinds & Noble, 1904.

THE MEDICAL EPITOME SERIES—ANATOMY.—By Henry E. Hale, A.M., M.D. Philadelphia and New York: Lea Bros. & Co.

INJECTIONS INTRAVESICALES D'IODOFORME DANS LE TREATMENT DE LA CYSTITE AMMONICALE.—Dr. Albert Freudenberg (de Berlin).

Society Proceedings.

NEW YORK ACADEMY OF MEDICINE, SECTION ON ORTHOEPEDIC SURGERY, MEETING OF FEBRUARY 19, 1904.

BY HOMER GIBNEY, M.D., CHAIRMAN.

Dr. George R. Elliott presented patients from Montefiore Home. The patients had the arthropathies of locomotor ataxia.

He said: In the first patient the left knee is the only joint affected, showing *genu inversum* and not to be confounded with primary *genu valgum*.

There is a certain enlargement of the head of the tibia, edema about the knee joint, and enlargement of the leg and thigh. The left leg and thigh measure one inch more than the right.

Incidentally, I wish to refer to his chief subjective symptom—a metatarsal pain. Four operations have failed to relieve this troublesome symptom.

The second patient shown is a man of about fifty-seven years, confined to a wheel chair and bed.

The joints involved are the small joints of the fingers, chiefly the first phalangeal joints. These deformities are globular in shape, painless and devoid of swelling, and have been so from the beginning.

The patient in his wheel chair, with overcoat on, placed the heel of both feet behind his head, demonstrating the condition common in locomotor ataxia known as muscular hypotonia.

He further presented a cast of the hand of a third patient who was unable to be moved. The cast showed very marked globular swellings of the phalangeal joints.

He also had a very marked arthropathy of the left shoulder, so badly involved that he could dislocate the joint at will. The head of the bone was markedly enlarged, the acetabulum filled up and destruction of the capsule and ligaments—all painless from the beginning.

Neuropathic arthropathies are not confined to locomotor ataxia, but are found in syringomyelia and certain other special cord diseases.

As in the present cases the characteristic manifestations are rather

sudden onset of a painless swelling, usually globular in shape, with partial subsidence and recurrence. The globular shape and absence of redness and pain differentiate it from the spindle-shaped, painful swelling of arthritis deformans.

Section of an advanced arthropathic joint shows destructive changes. There is usually laxity of the ligaments, rarefaction of the bony parts, general edema about the joint, which extends into and along the limb. It is not an edema that pits on pressure.

Only 3 to 4 per cent. of all tabetic patients manifest arthropathies.

Statistics show that the affected joints are much more frequent in the lower extremities, and not at all common in the small joints, seen in the two cases presented.

DISCUSSION ON DR. ELLIOTT'S CASES.

Dr. F. P. Gibney said he thought the laxity of muscles in Case No. 2 very interesting, and wanted to know whether that was a common feature of the disease. He thought it extraordinary to see a patient as old as this man with ligaments so relaxed as to enable him to put his legs over the back of his neck. In those cases he had seen the laxity of ligaments was in the ankles and knees.

The other case was interesting on account of the neuralgia in the internal plantar, and failure to get relief after section of the nerve, but he presumed that the tabes from which the man suffered rather ruled it out as a case of metatarsalgia.

Dr. R. Sayre said he was sorry not to have heard the remarks on the cases when presented. He had not seen the man's hip, nor seen him standing, but he thought possibly he might be fitted with hip splint apparatus to hold the hip so he could walk, if simply the ligaments were at fault through relaxation.

In many cases the relaxation affects the joints of knees and ankles as well. Dr. Sayre had many cases where the patients could walk around comfortably with lateral support on knees, where they were incapable of standing without this support, the ligaments being so relaxed. In these cases the joints are prone to luxate.

Dr. Brewer said he was interested in the case reported. He had treated a similar case, a neurotic boy, who complained of pain in the metatarsal joint of the great toe. He could not step nor walk. There was an extremely tender point over the joint, which was a little thickened and reddened. He had worn a badly fitting shoe, which, perhaps, caused slight deviation of the toe. The joint was opened, and found to be healthy. A little piece of bone was taken away, and

the pain was relieved. A return of acute pain occurred, which was relieved by the application of the cautery. This relief continued for a number of weeks, but the pain returned so intense the boy could do nothing. He was in an hysterical, nervous state. He was seen by Dr. Blake in my absence, who took out about one inch of the internal plantar nerve, affording relief. Three months later he again operated, taking out the whole of the nerve, which presented a small neurofibroma near its origin. The pain came back after awhile, and the boy underwent a fourth operation, this time Dr. Bull operating. In about three months there was a fifth operation, the result of which is unknown. Dr. Brewer would like more light on the subject of these cases.

He thought it rather common to find such laxity of the hip ligaments from non-use; that the case was not extraordinary.

Dr. Elliott said he believed it was a common symptom of locomotor ataxia, known as hypertonia, and he believed an early symptom. Neurologists present would doubtless settle that question.

In reply to Dr. Gibney he said he believed the condition common. (Reference made by Dr. Gibney to the man putting his foot over his head.) It had nothing to do with arthropathy. In the patient he had presented there were no changes in the hip joints. It was due entirely to loss of muscular tone.

Dr. Dana said he could only confirm Dr. Elliott's statement that there is this relaxation, very marked, in most cases of arthropathies, usually associated with atrophy of the head of the bone. He was interested in hearing the remarks about splints for the joints. He thought it a mistake always to put splints on tabetic joints. He cited a case in illustration.

Dr. Brewer said that he believed the case he cited was one of psychosis, and that there was no organic disease of the nerve.

Dr. Sayre said that in marked relaxation of ligaments it was sometimes quite possible to slip the femur on the tibia; when the patient is upright and moves in any direction, there is danger of complete luxation of the joint and possible rupture of the skin as well by constant violent slips. He had seen those who were incapacitated for going about except with two crutches, who, when properly fitted with apparatus, could walk with a cane. There was sufficient muscular power and sufficient co-ordination of the muscles to move the legs in antero-posterior motion, if something was put on to limit the lateral deviation.

The speaker had a case of Charcot's Disease of the ankle in which

the ankle resembled osteosarcoma; there was the egg shell crackling seen in malignant bone diseases. The patient was locked up in Plaster of Paris boot from the toe to the knee, in which he walked for a number of months, when a large part of the disability disappeared. In this case, back of the tabes, he had syphilitic history. He was put on anti-syphilitic medicines in large doses. The foot responded beautifully, and the inco-ordination disappeared. The man still retains his pin point pupils.

Dr. Homer Gibney presented a child of twenty months from the dispensary of New York Hospital, referred as case of lumbar Pott's Disease.

No disease of the spine was, however, found, but a very marked scorbutic condition in addition to a pronounced general rachitis. The scorbutus responded quickly to treatment, and the long posterior rachitic spinal curvature is yielding to a perfectly fitted frame on which the child is placed, and mother instructed as to its management.

The paper of the evening, "The Acute Infectious Osteomyelitis of the Spine and the Acute Suppurative Perimeningitis," was read by J. Ramsay Hunt, M.D.

DISCUSSION ON DR. HUNT'S PAPER.

Dr. Dana said he had only seen one such case as Dr. Hunt reported, and could add nothing to the subject. He only rose to express his gratification at the clear and convincing way the matter had been presented. He thought Dr. Hunt's view that perimeningitis is always secondary correct.

Dr. Brewer said he wished to thank Dr. Hunt for presenting the subject; he had only seen two such cases, both unrecognized at the time he first saw them. He had been looking for a comprehensive paper giving fuller statistics than could be found in abstracts from foreign literature, and such a paper had been read this evening. He thought it most valuable from a surgical point of view.

In each of Dr. Brewer's cases there was a perirenal abscess. The pus was found to issue from diseased vertebral bodies. In both cases there was extreme sepsis. He supposed at first that the trouble came from the kidney. After exploring the kidney and finding it normal, he made a small opening in the psoas, then into the vertebral column, and removed the sequestrum. The first patient died in a week or ten days. After death an autopsy revealed a very extensive process.

In the second case a man had chills and fever, and complained of pains in the back, which had been relieved for a number of days before

Dr. Brewer saw him ; and with the relief of pain there was the formation of a large lumbar indurated mass. This was opened. At the first operation a quart of pus was evacuated. The septic symptoms abated, but there was no closure of the sinus. A second operation was done to remove a supposed diseased and suppurating kidney. By making a large incision the region of the kidney was exposed, and found to be normal. The psoas was filled with pus ; also a focus in the body of the vertebra.

Dr. Brewer said he had another case, but was not sure it was primary septic osteomyelitis. It occurred in the arch. It was an old case operated on before Dr. Brewer saw it. He simply provided better drainage.

He thought these cases should be diagnosticated early, and that we should be on the lookout for them. The rate of mortality was high. The vertebral bodies are inaccessible, and require prompt treatment.

Dr. V. Gibney said it was an excellent paper. Those of the section who had been handling vertebra for a great many years would feel especially in sympathy with a differential diagnosis. We should not fail to recognize more cases than we have done in the past.

In regard to prognosis and analogy of osteomyelitis of the vertebrae and of the hip, when Mr. Smith, of London, began to report cases, and Mr. McNamara followed, there was frightful mortality. As they were recognized earlier, the mortality was much lessened, because their acute infectious nature was understood, and prompt measures were taken to secure relief. In place of dangled hips, with a few half-opened abscesses, we now have much better hips. Now we go at once to the focus of disease, removing sometimes a head lying loose in the cavity, fix the limb in good position, drain well, and get prompt relief and pretty stable hips.

During the last year or two, when so much has been said and observed about congenital hips, he had found cases said to be such hips, with one or two tell-tale sinuses on the outer side of the thigh, with history of acute abscess, which had been opened, when the child began to walk lame. A case came to see Dr. Gibney recently from a long distance, said to be congenital dislocation. He saw a cicatrix on the inner side of the thigh. He was told that at nine months the child had had an acute attack of hip trouble, the abscess opening and soon healing. When the child began to walk, no attention was paid to the hip. There was an inch and a half shortening, and the child was labeled as congenital dislocation of the hip.

He thought the points emphasized in Dr. Hunt's paper—early recognition and prompt surgical measures adopted for relief, were very opportune.

In regard to pachymeningitis, etc., he was reminded of a neurological experience—Dr. Putzell read a paper when we were finding a number of those cases, and the speaker had put on record two or three cases of peripachymeningitis hypertrophica cervicalis—not acute. Those cases are simply eliminated. We have to recognize the disease as osteomyelitis. We have stopped talking about acute suppurative periostitis and acute peripheral osteitis. Eight or ten years ago Mr. McNamara showed the speaker specimens in Westminster Hospital, declaring it was general osteomyelitis, and could not fairly be called periostitis.

Dr. Sayre said he could only add his voice to those who had preceded him. He thought, with Dr. Gibney, that the cases were recognized and operated on promptly now, and compared with the mortality of the past there was a gratifying number of recoveries.

He had had two cases showing acute supuration, and had opened, drained and cleaned. Under such treatment the majority of cases recovered, as had those he mentioned. The difficulty, however, was in recognizing the cases where the foci were deep-seated, and operating upon them promptly enough to give relief.

On motion of Dr. V. P. Gibney, a vote of thanks was tendered Dr. Hunt for his valuable paper by the Section.

S. A. TWINCH, M.D., *Secretary.*

LOUISVILLE CLINICAL SOCIETY.

Regular meeting, held at Seelbach's Hotel, Tuesday, March 8, 1904, with the President, Dr. J. W. Irwin, in the chair, and Dr. F. W. Samuels acting as Secretary *pro tem.*

MITRAL REGURGITATION.

Dr. Ewing Marshall: This patient came to me this morning, and I made a hurried examination. He is thirty-nine, married, has several children, a broommaker by occupation, but for several years has been in office work. He has a good appetite, but complains of shortness of breath, and has lost flesh in the last ten days. During the night he has jerking sensations and cramps in his legs. He has been subject to

falling spells since 1902, but was never known to froth at the mouth or bite his tongue. He has had about seventy of these spells since 1902, but only four since January 1st, but they were as severe. The aura preceding are nausea and burning of the eyeballs and bridge of the nose. He suffers from vertigo and the object seems to turn round him but he is able to reason out the matter with himself. He has weakness around the knees and pain in the chest, with little or no cough.

When I examined him I could hear a murmur, loudest at the nipple, transmitted to the left, typical of mitral regurgitation. It is increased on slight exertion, most pronounced at the apex beat. He says he had rheumatism thirty-one years ago, when he was eight, and his joints were enlarged. He thinks the cardiac trouble dates back fifteen years. He was examined and refused by one insurance company and afterwards accepted by the New York Life. There seems to be good compensation at this late day. He has had no rheumatism since 1889. There is little trouble in the lungs, but I think there is enlargement of the liver and spleen, which often antedates pulmonary symptoms. I would like to ask if this peculiar form of falling could be associated with the cardiac trouble?

Dr. W. Ed. Grant: As I recommended this man for life insurance I will open the discussion. The New York Life, the company for which I examined him, does not ask whether I recommended him, but ask for the facts. About eight years ago they commenced writing under-value policies on persons with heart murmurs. By the time the applicant has run for twenty years he has as good a policy as any one. The Medical Board says that it does not make so much difference whether the murmur is faint or loud.

This man seems to be anemic, and perhaps has some nervous trouble. He will probably get better in a little while and the heart condition will not trouble him. I can not say what his falling is due to, but I think it is epilepsy.

Dr. T. P. Satterwhite: I recall a case eighteen years ago, age thirty at that time, with marked mitral murmur, but with hypertrophy. I declined the risk, but he was accepted by two or three other companies. Since then the insurance companies have altered their tactics in this respect.

As to his falling spells, the manifestations of epilepsy are innumerable. I think the cardiac condition has nothing to do with it, unless it is due to syncope.

Dr. Geo. W. Griffiths: The horrors of all these organic diseases of the heart have been robbed by the finding in the dissecting room of thousands of old people who never knew they had heart trouble. I tell my cases there is no need of their dying if they do not exert themselves too much. I had an old man twenty years ago with organic disease of the heart, and if any man ever tried to die he did. He lived to a good old age.

Dr. J. W. Irwin: We find here a hypertrophied heart with a mitral murmur. There is roughness of the valve, and the sound is with the systole. I think it is not a stenosis, and there is very little regurgitation. The hypertrophied condition of the left ventricle makes it possible that he may shortly have little murmur at all.

As to the aura, falling, etc., this is not uncommon with circulatory disturbances. A great number of brain troubles are associated with epilepsy. The murmur is caused by roughness of the valves, and in such cases epilepsy is not uncommon. The stage of *petit mal* has passed and the attacks are growing less frequent as the heart improves. This man may make a good insurance risk, but an extra hazardous one. The presumption is that he will improve, but when he reaches the age where degeneration takes place, we can not say what will happen. It is perilous for insurance companies to take risks of this kind.

Dr. Marshall (closing): As to the insurance question, I remember that I have seen in the *Lancet* many references to changes in the last ten years with reference to heart murmurs. They are not so severe in their examinations now for the army and navy.

As to the hypertrophy, my experience in the medical clinic of the University of Louisville has been that the mistake the majority of doctors make is in the line of over stimulation. These patients need sedatives primarily instead. Hurrying them on to hypertrophy means hurrying them on to dilatation. The best you can do for a man like this is to let him live along as quietly as possible. He should have no stimulant of any kind until there are evidences of failure.

I disagree with Dr. Irwin that it is a stenosis. It is simply regurgitation. The murmur is the typical bellows murmur loudest at the apex, transmitted to the left. I agree with the different manifestations of epilepsy.

Essay by Dr. John R. Wathen, "Present Status of Radio-Therapy," leading original article this issue.

DISCUSSION.

Dr. M. K. Allen: I doubt if any of us, outside of the essayist, know anything about radium. It is a scientific paper, and covers the ground up to date. We may expect a great deal from it in the future.

Dr. Irwin Abell: I have had no experience whatever with the X-ray, and I was particularly interested in the microscopic appearances produced. The X-ray work will necessarily fall into the hands of a very few people, and I think the best results will be obtained by allowing this class of patients to fall into the hands of men thoroughly familiar with that line of work.

Dr. T. P. Satterwhite: Dr. Wathen has done some very satisfactory work for me, and is well equipped for it. Our hospitals are exceedingly defective in appliances of this kind, and we need men who know how to handle this line of work. It is impossible to take most of our patients to their offices for treatment.

Dr. Geo. W. Griffiths: If the X-ray work falls into the hands of such men as the essayist, equipped for it from boyhood, it will not be a toy. I am proud of him, and his paper will do an immense amount of good.

Dr. W. H. Wathen: I have been familiar with the X-ray work by observation for many years, and have watched its developments with interest. Too much has been expected from its use because men have been using the X-ray who did not thoroughly understand the histological and pathological conditions of the tissues and the principles that underlie the results to be expected. Diseases have been treated that could not possibly be cured, and few that could be benefited. There are three things in this paper of special value. First, the scientific principles upon which we may expect to get results. Second, the practical method of using the X-ray. Third, and most important, we should not expect results from the use of the X-ray in deep-seated malignant diseases with our present knowledge. I do not believe there is an authenticated case, correctly diagnosed, of a cure of malignancy in a deep-seated structure, or even in the rectum, bladder or liver. It is to be hoped that finally the rays will be able to reach these structures without destroying healthy intervening tissues.

Dr. Hays (visitor): I had the pleasure of sending the essayist a case some time ago. The man had Hodgkin's Disease, and after quite a time he made a perfect recovery. His health was miserable before the treatment.

Dr. Ewing Marshall: I would just like to say that it occurs to me that in the treatment of tubercular glands with the X-ray, there is little prospect of relief. There would be danger of the glands breaking down and the infection spread through the system.

With reference to malignant disease, I should think the removal of superficial growths by the knife prior to treatment with the rays would offer the best hope of relief.

Dr. F. W. Samuel: I have enjoyed the paper very much. My experience with the X-ray as a therapeutic measure has been *nil*.

Dr. J. W. Irwin: It is a new measure that has done very good work, and even if the results be wholly confined to the surface, that alone is remarkable. Electricity is a very subtle force, and the time may come when we will know more about it. The paper is along strictly scientific lines. I am very much pleased to say that I know of no paper I have read in a medical journal in the past decade equal to the paper read this evening.

Dr. John R. Wathen (closing): I offered this paper as a resume of the present status of the subject and purposely left out clinical records of cases, though I have personally had unusually good success. I think this is because I have selected my cases and did not treat hopeless ones.

Results have been unusually good with tubercular glands. They first become swollen and later an atrophy takes place. I have treated five cases of Hodgkin's Disease with excellent results. The worst case was that referred to by Dr. Hays. I have seen some cases disappear almost in the first day or two of treatment. Lupus, especially, yields to treatment. The hardest type seems to be where the mucous membrane joins the skin, in which case I should advise excision first. I always believe in removing what we can with the knife first. In epithelioma of the nose, however, it is best not to operate, for the tissues must fill in and leave an ugly scar. Under the X-ray the repair process goes on at the same time with the destructive process and the scar is not displeasing.

What the future of all forms of light treatment will be we can not say. Radium is limited in its application, but possibly may be far more useful in cavities than in any other form. The Finsen light has some advantages, but the X-ray is the most satisfactory of all, both for diagnostic and therapeutic use.

Medical Notes.

Some Points Concerning Natural Mineral Waters in General and Apollinaris Water in Particular. "It is difficult to suggest, in view of the facts just recorded and of the experience which has decided upon the adoption of the methods of bottling Apollinaris which we have described, how these methods could be altered with any possible advantage to the public or how any modification of these methods would enable the public to receive the water in a more natural condition than it is. As a matter of fact Apollinaris water is bottled in such a way that the natural equilibrium of the water and its complement of gas at a depth of fifty feet in the spring are preserved in the bottle for public use. Both water and gas are absolutely the natural products of the spring, and the composition of the bottled water is, according to our analysis, always the same and without any appreciable variation in the mineral constituents. Some portion of a useless constituent, in the form of oxide of iron (the total amount in the water being quite minute) separates from the water prior to bottling, but a useful constituent, in the shape of a small quantity of salt, is added to augment the amount of salt already naturally present in the spring in order to prevent the possible decomposition to which the sulphate of sodium of the water is occasionally liable. The taste of the water in bottle is identical with that of the water taken directly from the spring. Apollinaris water has a peculiar soft flavor, which is due not to common salt at all but in part to the alkaline carbonates which neutralize the acids in the mouth, and in part to the natural state of combination of the mineral ingredients. As Professor Oscar Liebreich has said, 'even the best manufactured artificial mineral waters differ from the natural ones in taste and value.' There is nothing disclosed in our analysis of the bottled water which is not found in the water at the spring. In view of these facts, which we have taken some trouble to ascertain for ourselves, it seems to us that the recent decision of the Lord Chief Justice that Apollinaris water is entitled to the description of a natural water is in accordance with both law and common sense.

"We may add that our analyses and observations are in substantial agreement with those given at various times by the late Professor Virchow, Professor Bischof, Professor Liebreich, Professor Mohr, Professor Hofmann, Professor Kekule, Professor William Odling and the late Sir Edward Frankland."

A Comparative Study of Atropin and Hyoscyamin.—The similarity between the effects of belladonna and hyoscyamins, especially of the two dominant alkaloids, atropin and hyoscyamin, makes an exact study of these substances of much importance. In most of the investigations which have been made with hyoscyamin the substance used has not been one of known chemical purity, and it is very probable that some of the effects attributed to hyoscyamin are the result of the contamination with hyoscin. For this reason Cushny has investigated (*Journal of Physiology*, 1903, Vol. 30 page 176) the comparative effects of atropin and hyoscyamin of known purity.

His results show that the two alkaloids, except for quantitative differences, are pre-parallel in their physiological action. Of the two, atropin seems to exercise a more powerful action on the spinal cord, while hyoscyamin was twice as active in its effect upon the salivary glands, the pupil and the pulse rate.—*The Therapeutic Review*.

The Effect of Arsenic on the Blood-Making Organs.—Stockman and Charteris (*Journal of Path. u. Bacteriol.*, 1903, Vol. VIII., page 443) believe that arsenic has no direct action in increasing the production of red corpuscles, its value in malarial and pernicious anemias depending upon its destructive action on the parasites. They base this conclusion upon examinations of the bone marrow of fatal cases in the recent epidemic of arsenic poison in England, as well as studies made upon dogs. These latter show that after small repeated doses of arsenic there is an increase in the formation of the white cells of the bone marrow without any change in the formation of the red cells. After large doses of the poison there occurs a hyaline degeneration of the bone marrow with a corresponding decrease in the number of erythrocytes.—*The Therapeutic Review*.

Viscin.—According to Vorner (*Deutch. Med. Woch.*, 1903, Vol. 29, page 744) viscinum dupuratum is a substance prepared from bird lime and intended as a substitute for rubber in the manufacture of such articles as adhesive plaster, and as a means of applying remedies in skin diseases in such form that they will remain in place. Its advantage over rubber is chiefly in its price. In skin diseases it may be used advantageously in the form of a solution in benzin, to which may be added various remedies, as salicylic acid, zinc oxide or chrysorobin, according to indications. The preparation is then painted on the skin.—*The Therapeutic Review*.

Health Report.

The following table shows the total deaths from all causes, the deaths from consumption and from pneumonia, and the proportion of these latter deaths to total deaths in the two cities, between November 1, 1903, and March 12, 1904, inclusive :

	New York.	Chicago.
Total deaths, all causes.....	27,974	10,728
Deaths from consumption.....	3,105	1,056
Deaths from pneumonia.....	5,950	2,313
Proportion, per cent. of all deaths—		
From consumption.....	11.1	9.8
From pneumonia.....	21.3	21.5

Statement of mortality for the week ended March 12, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and of 1,820,000 for 1903 :

	Mar. 12, 1904.	Mar. 5, 1904.	Mar. 4, 1903.
Total deaths, all causes....	549	625	631
Annual death rate per 1,000.	14.75	16.71	17.44
By sexes—			
Males.....	331	364	351
Females.....	218	261	280
By ages—			
Under 1 year.....	99	102	103
Between 1 and 5 years....	41	44	64
Over 60 years.....	126	142	135
Important causes of death—			
Acute intestinal diseases....	20	27	23
Apoplexy.....	10	8	13
Bright's Disease.....	38	33	39
Bronchitis.....	21	30	35
Consumption.....	86	54	60
Cancer.....	24	14	15
Convulsions.....	15	17	20
Diphtheria.....	6	5	15
Heart disease.....	32	51	31
Influenza.....	3	5	19
Measles.....	1	0	6
Nervous diseases.....	14	32	27
Pneumonia.....	127	165	133
Scarlet fever.....	4	3	4
Small-pox.....	0	0	2
Suicide.....	5	7	17
Typhoid fever.....	9	13	13
Violence (other than suicide)	20	31	20
Whooping cough.....	0	1	10

Notice.

EXAMINATIONS FOR ARMY MEDICAL SERVICE.

The examination of applicants for appointment as Assistant Surgeon in the United States Army will be resumed in Washington immediately after the close of the present session of the Army Medical School; it will embrace the full examination (as heretofore), at the conclusion of which those found qualified will be commissioned. Full information as to the requisite qualifications for appearance for examination, method of application, nature and scope of examination, etc., may be obtained upon application to the Surgeon General, U. S. Army, Washington, D. C. The Examining Board will probably reassemble about the middle of April next, and those desiring to present themselves before the Board should make application at once. Applicants are restricted in age to thirty years, and one year's hospital experience or its equivalent in private practice is required.

OFFICIAL LIST OF THE CHANGES OF STATION AND DUTIES OF COMMISSIONED AND NON-COMMISSIONED OFFICERS OF THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE FOR THE SEVEN DAYS ENDED MARCH 10, 1904.

Wertenbaker, C. P., Surgeon—To report at Washington, D. C., for special temporary duty, March 5, 1904.

Wickes, H. W., Passed Assistant Surgeon—Granted leave of absence for one day, March 4, 1904.

Von Ezdorf, R. H., Passed Assistant Surgeon—To proceed to Delaware Breakwater quarantine for special temporary duty. March 8, 1904.

Relieved from special temporary duty at Delaware Breakwater quarantine on account of sickness, and directed to rejoin his station at the Hygienic Laboratory, Washington, D. C. March 10, 1904.

Bogges, J. S., Assistant Surgeon—Bureau letter of March 2, granting Assistant Surgeon Bogges eight days leave of absence from February 18, 1904, amended so that said leave shall be on account of sickness, March 4, 1904.

Simonson, G. T., Acting Assistant Surgeon—Granted leave of

absence for five days from March 15. March 10, 1904.

Station, L. W., Acting Assistant Surgeon—Granted leave of absence for two days from March 3. March 4, 1904.

OFFICIAL LIST OF THE CHANGES OF STATION AND DUTIES OF COMMISSIONED AND NON-COMMISSIONED OFFICERS OF THE
PUBLIC HEALTH AND MARINE HOSPITAL SERVICE
FOR THE SEVEN DAYS ENDING
MARCH 17, 1904.

Carter, H. R., Surgeon—To proceed to New Orleans, La., and attend conference of quarantine officers March 14. March 12, 1904.

Brooks, S. D., Surgeon—Department letter granting Surgeon Brooks leave of absence for four months from April 1, 1904, amended to read four months from April 6. March 12, 1904.

Guiteras, G. M., Surgeon—Department letter granting Surgeon Guiteras leave of absence for three months from December 19, 1903, amended to read two months and five days from December 19, 1903. March 5, 1904.

McMullen, John, Passed Assistant Surgeon—To proceed to Immigration Depot, New York, N. Y., and report to Surgeon G. W. Stoner for duty. March 12, 1904.

Grubbs, S. B., Passed Assistant Surgeon—Granted leave of absence for twelve days from March 18. March 18, 1894.

Richardson, T. F., Assistant Surgeon—Relieved from duty at New Orleans, La., and directed to proceed to Laredo, Texas, and assume command of service at that port. March 16, 1904.

Francis, Edward, Assistant Surgeon—To proceed to Delaware Breakwater quarantine, and assume temporary charge of station during illness of Passed Assistant Surgeon C. H. Lavinder. March 10, 1904.

Bullard, J. T., Acting Assistant Surgeon—Granted leave of absence for twenty-seven days from March 4. March 9, 1904.

Moneure, J. A., Acting Assistant Surgeon—Granted leave of absence for thirty days from April 1. March 9, 1904.

Nall, R. P., Acting Assistant Surgeon—Granted leave of absence for seven days from March 1, 1904, under paragraph 210 of the regulations.

Sibree, H. C., Acting Assistant Surgeon—Granted leave of absence for five days from March 15. March 12, 1904.

Simonson, G. T., Acting Assistant Surgeon—Bureau letter of March 10, 1904, granting Acting Assistant Surgeon Simonson leave of absence

for five days from March 15, 1904, amended to read five days from March 22. March 17, 1904.

Stanton, J. G., Acting Assistant Surgeon—Granted leave of absence for thirty days from March 8. March 9, 1904.

Thurston, E. J., pharmacist—Granted leave of absence for seven days from March 9, 1904, under paragraph 191 of the regulations.

Kolb, W. W., pharmacist—Granted leave of absence for twenty-eight days from April 2. March 14, 1904.

APPOINTMENT.

Dr. Melvin M. Hopkins appointed Acting Assistant Surgeon for duty at Ketchikan, Alaska. March 9, 1904.

BOARD CONVENED.

Board convened to meet at New Orleans, La., March 21, 1904, for the physical examination of officers of the Revenue Cutter Service. Detail for the Board: Surgeon C. P. Wertenbaker, Chairman; Passed Assistant Surgeon L. L. Lumsden, Recorder.

Board convened to meet at San Francisco, Cal., March 21, 1904, for the physical examination of officers of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon W. G. Stimpson, Chairman; Assistant Surgeon Carl Haus, Recorder.

Board convened to meet at the Marine Hospital, Port Townsend, Wash., March 21, 1904, for the physical examination of officers of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon J. H. Oakley, Chairman; Passed Assistant Surgeon M. H. Foster, Recorder.

Board convened to meet at Washington, D. C., on the call of the Chairman, for the physical examination of officers for promotion and applicants for admission into the Revenue Cutter Service. Detail for the Board: Assistant Surgeon General L. L. Williams, Chairman; Assistant Surgeon General W. J. Pettus, Recorder.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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NO. 144.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. —RUSKIN.

Original Articles.

PNEUMONIA AND ITS TREATMENT.*

BY DR. S. P. OLDHAM.

Possibly 'tis true that no subject has been worn more threadbare than that of pneumonia and its treatment. Papers have been read and discussed and reread and discussed from time immemorial, and no doubt but very few doctors in this Alumni Association but that have either read or discussed this subject thoroughly many times. But with all this we have not been able to reduce the mortality of this one dreaded disease, which to-day possibly claims more victims than any other two diseases combined. Back in the early days when our forefathers fought pneumonia with all the vim and vigor that they possessed; when they were wholly unacquainted with bacteriology and histology; when they knew nothing of the germ theory; when they treated this disease by venesection and mush poultices, they were able to maintain a mortality of 25 per cent. And later on, when venesection was abandoned, when this method of treatment was relegated to the rear, and in its stead was supplemented stimulation of the heart, and cotton jackets succeeded the mush poultices, still the mortality remained practically the same. Even down to the present time, when medicine is making such rapid strides; during this bacteriological age and with the use of anti-pneumococcus serum and by the use of oxygen, cold baths, ice caps, etc., in treating this disease, and while we are able to reduce the mortality of all other

*Read before the Alumni Association of the University of Medicine, Louisville, Ky., Feb. 1, 1904.

acute infectious diseases, we are unable to materially affect the 25 per cent. mortality in pneumonia. It is, then, for this reason, I think, that we should never grow weary in reading and discussing this disease, but rather we should renew our energy, and resolve to still further investigate and experiment until we have at least found some specific or some method of treatment by which we can reduce this fearful death rate. This disease may be said to be an almost universally distributed affection; it prevails, however, more extensively in certain countries than others. In the United States it is seen more frequently in the South than in the North. Climate, however, does not exercise a notable influence, being more often seen in the spring months than in the fall or winter. It occurs at all periods of life, and during the first two years of life it is quite frequent; so, also, is it frequent between the ages of forty and sixty. There is no time, however, but that we are susceptible to its ravages. Complications are common in pneumonia, pericarditis being one of the most common; so, also, is endocarditis. Out of 209 cases of this disease collected by Osler, 54 of them were caused by pneumonia, and among other more rare complications are purulent meningitis, peripheral neuritis and peritonitis. The diagnosis of pneumonia is determined by special local and general symptoms, together with physical signs which you are all familiar with. The general symptoms or evidences of pneumonia intoxication are in proportion to the extent of the pulmonary lesion; therefore the gravity of the case can oftentimes be measured by it, but not always; for even death may occur when the pneumonia inflammation is very limited, and the amount of toxins small in one who is debilitated, and especially one who is a very nervous temperament. A very important thing to be considered when called to see a case of pneumonia is the age of the patient, the vitality and the ability he seems to possess to eliminate from his system the poison of this disease, for it is often the case that physicians of fair experience well know that the most desperate cases are not infrequently those in which the pulmonary symptoms are for a number of days obscure, while the nervous and circulatory symptoms are well marked. The functional activity of the kidneys have much to do with the preservation of the patient's life. When these organs are diseased and are temporarily lacking in functional activity, poisons rapidly accumulate in the body, which speedily overwhelm the heart and nervous system, whereas in those instances in which free diuresis is present elimination

goes on so rapidly that profound toxemia can not develop, even though the affection is moderately severe.

As yet no specific has been found with which to combat pneumonia, or to protect those who are exposed to it, nor can we prevent the extension of lung lesion from one part of the lung to the other. There can be but little doubt about the almost universal need of the preliminary calomel purge; enough shall be given to thoroughly empty the alimentary canal and to increase the action of the liver and kidneys. This should be followed by a saline bath for its diuretic and purgative effect. A mustard foot bath, followed by sponging the body with tepid water would not be amiss, for it not only promotes diaphoresis, but stimulates the circulation and thereby increases the efficiency of the heart. An opiate may be given in the first stage to relieve the pain accompanying the pluritic adhesion of the lung; so also might it be given when there is a dry, harrassing cough. Morphine hypodermatically is best for this purpose. This, as I think completes the role that opium should play in treatment of this disease, fater than this it does decided harm. In controlling the fever in pneumonia we should never resort to the use of heart depressants (for this is our stronghold); but rather resort to the use of sponge baths, ice caps, for this reduces fever, promotes diaphoresis, stimulates the heart's action and quiets the nervous system; whereas, in using heart depressants you reduce the fever and cripple the heart. When our patients are restless, delirious and unable to sleep we feel that we must quiet their nervous system and get them to sleep. What could do this more quickly or with as little harm as a tepid sponge bath?

Indeed, I have seen patients who had a very quick pulse, who were quite restless, with low, muttering delirium, fall to sleep and sleep one or two hours following these baths, and upon awakening feel very much refreshed, with pulse slower and a rational mind. Our patients should have very nutritious diet, and should be fed frequently that they may maintain strength to withstand the disease. Blood letting is spoken of in the treatment of pneumonia. I think this would be of benefit only in the advanced stage when we have engorgement of the right heart, which is unable to unload its burden because of the lung being already gorged with blood which it can not get rid of. In this condition I think we should resort to venesection, but should be followed in a short time by a high enema of normal solution. We should ever stand sentinel over the heart and watch its action, and at its first intimation of fagging we should be ready to reinforce it by

stimulation, first by whisky or brandy, of course watching action to see that it has no untoward effect; if not, push it vigorously. Later on we should give strychnia, one-thirtieth at first, then gradually increase the dose to one-fifteenth every two or three hours, if necessary, closely watching your patient, and just at the crisis, when the fever takes a tumble and your patient is prostrated, when there is danger of his slipping from your grasp, add to your strychnia nitroglycerine with increased amount of whisky, and oftentimes you will have won a victory and feathers will be placed in your cap.

Digitalis has but very little place in the treatment of pneumonia.

SORGH0, KY.

LUDWIG'S ANGINA.

BY W. O. HUMPHREY.

On the night of January 29th I was called to see M. B., white, male, age 28, with the history of having had tonsilitis two weeks before, and had recovered, so it was thought, until the day before I was called, when his neck began to swell and pain him very much. The family and personal history were found to be negative, as also were the lung and heart signs. On examination a brawny swelling just below the jaw on the left side in the region of the submaxillary gland was found. The swelling was very painful and tender, and the skin over it was reddened. The tongue was pushed up in the mouth by the edematous fascia beneath it, and the tongue itself swelled and thickly furred. There was considerable difficulty in speaking and swallowing, and slight dyspnea, which added greatly to the patient's distress. The temperature under the tongue was $102\ 1-2^{\circ}$, the pulse 120. Being unable to make a positive diagnosis of the presence of pus on account of the known density of the cervical fascia, a purge was ordered and an alcohol poultice applied, with directions to keep dressings moist with 25 per cent. of alcohol and water. On the next day the pain had subsided, but the constitutional symptoms were not in the least abated, and a blood examination was made. The leucocyte count was 18,000, so the patient was sent to the infirmary that evening, and orders left to be prepared for an operation the next morning. The incision recommended by Gould, of London, was not practical, so a vertical incision a little to the left of the median line about one and one-half

inches in length was made. A finger was then introduced, and a disintegrated submaxillary gland removed, while about one-half pint of not offensive sero pus was evacuated. After thorough irrigation a drain was inserted, and hot carbolic fomentations applied over the wound. During the next few days, a sero pus drained away, the swelling disappeared entirely, and the patient was greatly relieved, but no appreciable improvement of general health could be detected. The temperature on the day following the operation fell to 100°, but rose again in the afternoon to 102.1-2°, where it remained. An examination of the pus showed the pneumococcus, with some streptococci present. The discharge ceased in three or four days, but the wound would not close. A pneumonia developed on the ninth day, from which the sufferer died on the night of the third day. I was, very much to my sorrow, unable to obtain a post-mortem. I am unable to say how the micro-organism gained entrance; it may have been through the tonsil, or it may have been through a vesicle close by the frenum. The low form of infection would probably indicate that the pneumococcus was the primary factor.

If I could have made a blood examination at first visit and operated sooner, the poor unfortunate might yet be alive, yet this is mere conjecture, as all the meager literature on this subject shows that almost every case dies sooner or later of exhaustion or low pneumonia.

Some months ago I reported to this society a case, M. C., white, female, age 20, that I had Dr. Sherrill to see with me. I was not able to make a blood nor pus examination, but the course of the disease was strikingly similar. Death occurred in this case during fourth week from exhaustion.

This low and exceedingly dangerous form of cellulitis was first described by Ludwig, hence the name.

LOUISVILLE, KY.

Selections.

THE PRESENT STATUS OF IRON THERAPY.

BY REYNOLD W. WILCOX, M.D., LL.D.

Professor of Therapeutics and Medicine at the New York Post-Graduate Medical School and Hospital ; Consulting Physician to the Nassau Hospital ; Physician to St. Mark's Hospital, Etc.

In discussing the form and method of the administration of a remedy which is one of the necessary constituents of the body, we should endeavor to ascertain how this element is supplied to the body by nature. From this standpoint it would seem that much which has been recommended is illogical. A moment's thought shows us that the iron, so necessary to the infant for the rapid increase of the bulk of its blood, is introduced in its food, and, necessarily, in organic combination. If we should select our food for its richness in iron we should place at the head of the list fish, descending through spinach, apples, oats, beef, lentils, strawberries, beans, potatoes, eggs, wheat, rye, cabbage, corn, veal, human milk, cows' milk to rice. For obvious reasons, however, it is impracticable to rely upon food to supply the deficiency of iron in conditions of disease; the inevitable conclusion is that iron, when required, should be introduced into the organism independent of food, and all physiological facts indicate that the iron should be organic in form. The steps which led up to the now accepted scientific fact that organic iron is the form of choice are as follows: In 1885 St. Zalenki discovered iron-bearing bodies in the tissues. This was confirmed by Bunge, who isolated one of these bodies from the yolk of egg, and by Woltering and Spitzer, who showed their existence in the testicles, spleen, etc. Shortly after, Dastre and Floresco showed the interchangeability of the iron in food with the iron in the human tissues. The following year Naunyn and Minkowski showed that iron is retained in the liver in the form of iron-bearing pigments and proteids, and later Schmiedeberg isolated one of these and determined its chemical (organic) character. Leichtenstern showed, as was to be surmised, that iron-bearing food caused an increase of iron in the blood and tissues of man. Schmiedeberg, the father of scientific therapeutics, endorses this opinion, and states that iron as it exists in food is "undoubtedly the blood-forming

combination." In 1896 Chetta proved that hemoglobin, when given by the mouth, is destroyed in the stomach, and therefore that animal blood is useless as a means of increasing the red blood cells or hemoglobin in man. In the same year Quincke and Hochhaus showed the course of iron after absorption from the duodenum through its epithelium, to the lymph channels, to the blood, temporarily stored in the spleen, then transferred by the blood to the liver, where it is stored as a ready reserve to be drawn upon by the blood as the system requires iron to replace the iron excreted daily.

Since inorganic iron is not easily assimilated (Schmiedeberg represents the authoritative opinion in the statement that it is "only inadequately absorbed") and also because inorganic iron disturbs digestion, is astringent and of lower potential energy, it is not strange that for many years attempts have been made to produce an iron compound that would be chemically identical with that existing in the food, and which is nature's method of introducing iron into the economy. One must not, however, be misled as to what constitutes true organic or masked iron. The so-called "organic" iron compounds used medicinally are nothing more than simple combinations of iron salts with albuminoids, and every one familiar with chemistry or pharmacology considers them as essentially the same as the ordinary inorganic forms of iron, such as iron acetate, chloride, carbonate, etc. To this inorganic class belongs the iron albuminate, the pepto-manganates, etc., and not one of these forms of iron responds to the test for organic iron; this latter fact is easily proven by the precipitate which results from the addition of silver nitrate, the blue-black color of inorganic iron when MacCallum's test (hematoxylon solution) is applied to the so-called organic iron compounds, and the iron chloride formed by the addition of gastric juice.

Therefore, in the present advanced state of our knowledge of the chemistry and therapeutics of iron, the *desiderata* which an iron compound should possess are:

1. It must be in definite organic combination.
2. The iron must be able to resist the action of the free hydrochloric acid of the gastric juice without the formation of iron chloride, which has been demonstrated to coagulate the gastric mucosa, cause localized necrosis of it, and produce inflammatory exudate.
3. It must not interfere with digestion.
4. It must not be irritating or astringent.
5. It must show definite results in (a) increase in the number of

red blood corpuscles and (b) in the amount of contained hemoglobin. These requirements are admittedly the most rigorous and at the same time the most scientific; let us see how ovoferrin, a recent claimant for therapeutic recognition, meets these requirements.

It is claimed that ovoferrin is a true organic iron, a definite chemical combination; that it does not disturb digestion, and is not astringent, is more easily assimilated, and has a more rapid reconstructive influence upon the red blood cells and hemoglobin. Its chemical formula is $C^{47}N^{17}SH^6Fe^*O^{22}$; it is a clear red solution, neutral in reaction, odorless and tasteless. To assure myself of its chemical nature, I submitted a sample of the product to the distinguished chemist, Dr. Virgil Coblentz, Professor of Chemistry at the New York College of Pharmacy, for analysis; Professor Coblentz's report is as follows:

"I find 8 per cent. of iron (calculated as metallic iron) present in the state of organic combination. This organic combined iron is present neither in the form of peptone, albumose, nor nuclein combination. Judging from all its reactions, that is, failure to precipitate with silver nitrate, a negative reaction with McCallum's test (the most delicate known), unchangeability toward hydrochloric acid, with other tests, I place ovoferrin, beyond doubt, as a representative of a new class of true metallo-organic derivatives, in which the iron is held in the molecule in a masked condition. I can state positively that it is a definite true organic iron compound."

Since the chemistry of the substance is absolutely established upon an unassailable foundation, and as it is uninfluenced by hydrochloric acid, and as it seems to be chemically identical with iron as it occurs in the food, it is of the highest interest to us as therapeutists to determine its demonstrable effects in the clinical conditions associated with deficiency of red corpuscles and hemoglobin. In the cases selected for observation the purposes of iron-administration were:

1. To supply ordinary waste, as for instance, if too little food, or food too poor in iron, has been ingested.
2. To supply extraordinary destruction as from hemorrhage.
3. To compensate for failure to utilize food because of metabolic disturbances, as in the infections or the diathetic conditions, as gout, rheumatism, diabetes and the like.

The patients were purposely selected from the dispensary because this class can, least of all, change their food, habits of life and employment, or adopt means of right living. The test, then, was far more rigorous than when applied to patients in private practice, in whom

improved hygiene will in itself produce considerable benefit.

The action of ovoid ferrin as a hematint is seen from a glance at the following tables, which show the effects on both red blood cells and the hemoglobin. The blood estimations were made contemporaneously every four days :

CASE I.—Secondary anemia from subacute rheumatism.

First count:	hemoglobin,	54	per cent.;	red blood cells,	2,250,000
Second "	"	65	"	"	3,400,000
Third "	"	78	"	"	4,100,000
Fourth "	"	85	"	"	4,300,000
Fifth "	"	93	"	"	4,700,000

Discontinued treatment.

CASE II.—Secondary anemia from gastrointestinal catarrh.

First count:	hemoglobin,	40	per cent.;	red blood cells,	2,250,000
Second "	"	55	"	"	3,100,000
Third "	"	75	"	"	3,600,000
Fourth "	"	85	"	"	4,100,000
Sixth "	"	95	"	"	4,500,000

Discontinued treatment.

CASE III.—Secondary anemia ; malaria ; chronic diarrhea.

First count:	hemoglobin,	45	per cent.;	red blood cells,	2,550,000
Second "	"	60	"	"	3,000,000
Third "	"	72	"	"	3,700,000
Fifth "	"	88	"	"	4,100,000
Sixth "	"	92	"	"	4,350,000

CASE IV.—Secondary anemia from prolonged lactation.

First count:	hemoglobin,	55	per cent.;	red blood cells,	2,250,000
Second "	"	70	"	"	2,550,000
Fourth "	"	85	"	"	3,750,000
Fifth "	"	92	"	"	4,350,000
Sixth "	"	95	"	"	4,500,000

An examination of these tables shows conclusively the parallelism of the lines of increase of hemoglobin percentage and of increase of red blood cells. Inasmuch as the ratio of increase is constant, the estimation of the hemoglobin alone gives an exact statement as to the progressive upbuilding of the blood. Since in blood counts personal equation and experience cause many variations, in the remaining instances cited hemoglobin estimations alone will be given. Skill in the use of the Fleischl hemoglobinometer is readily acquired, and personal equation enters but slightly into the results. The instrument employed in this study, made by Reichen, was compared with a Gower

instrument of known accuracy, so that, therefore, the results were doubly checked and verified.

CASE V.—Sewing girl, aged nineteen years. October 14: For several months occipital headaches, fainting spells, anorexia, dyspepsia, constipation, tinnitus; hemoglobin, 43 per cent.; pulse 108; hemic murmur in neck, in second left intercostal space; ventriculosystolic murmur at apex, mucosa blanched. Prescribed ovoferrin, tablespoonful in water four times daily. October 21: Apical murmur has disappeared entirely, appetite has returned; hemoglobin, 54 per cent. October 28: No attacks of fainting, headache only at night; hemoglobin, 67 per cent. November 4: Eats without discomfort; no tinnitus; hemoglobin, 74 per cent. November 11: No headache, no murmurs; hemoglobin, 88 per cent. November 25: Feels well and has menstruated normally; hemoglobin, 97 per cent. Reported only because requested.

CASE VI.—Saleswoman, aged thirty-six years. October 16: Vertigo, buzzing in ears, nausea at sight of food, angiospastic hemi-crania at menstrual periods, backache, dysmenorrhea; hemoglobin, 51 per cent. Prescribed ovoferrin, tablespoonful in water t. i. d. October 23: No nausea, vertigo and tinnitus less; hemoglobin, 60 per cent. October 30: Marked general improvement; hemoglobin, 72 per cent. November 6: No vertigo or tinnitus, menstrual period passed with less pain, no headache; hemoglobin, 79 per cent. November 20: Has good appetite and digestion; returned to work; hemoglobin, 94 per cent. November 27: Feels perfectly well and was discharged; hemoglobin, 98 per cent.

CASE VII.—Porter, aged forty-two years. October 19: Chronic alcoholic; urine: specific gravity 1012, urea 1.21 per cent., few hyaline casts. Persistent headache, nausea, morning, vomiting, vertigo, swollen feet; pulse 108, hemic murmur in neck, pallor of lips, hemoglobin, 47 per cent. Prescribed ovoferrin, tablespoonful in wine glass of water four times daily. October 26: No edema of feet, pulse 86, less vertigo; hemoglobin, 54 per cent. November 2: Urine: specific gravity 1016, urea 1.46 per cent., very few casts; no headache; hemoglobin, 61 per cent. November 9: No vomiting, no headache; hemoglobin, 72 per cent. November 16: No hemic murmur, no nausea. Urine: specific gravity 1019, urea 1.45 per cent., good appetite. November 30: No edema, good color, feels much better; hemoglobin, 89 per cent. Ordered to continue ovoferrin for one month.

CASE VIII.—Waitress, aged twenty-eight years. October 20:

Amenorrhea for two months, leucorrhea, frontal headache, backache, nervousness, total loss of appetite, eructations, constipation, frequent urination, hemic murmurs, palpitation, constriction in chest; hemoglobin, 51 per cent. Prescribed ovoferrin, tablespoonful t. i. d. October 27: Less leucorrhea, urination normal, some appetite; hemoglobin, 64 per cent. November 5: Less nervousness, no eructations; hemoglobin, 71 per cent. November 12: Has menstruated, no leucorrhea, only occasional headache and backache; hemoglobin, 79 per cent.

CASE IX.—Cash girl, aged eleven years. October 30: Fainting, tinnitus, dimness of vision, has never menstruated, complete loss of appetite, constant frontal headache, lassitude, hemic murmurs, pallor, blanched mucosa; hemoglobin, 39 per cent. In this instance the dose of ovoferrin was doubled (one ounce four times daily). November 6: Appetite is ravenous, less lassitude, less dyspepsia; hemoglobin, 91 per cent. November 13: No tinnitus or dimness of vision, less headache no murmur at apex; hemoglobin, 63 per cent. November 20: But few indefinite symptoms; hemoglobin, 76 per cent. November 27: No faintness, no headache, no dyspepsia, appetite above normal; hemoglobin, 91 per cent. Discharged and ordered to return after continuing iron for two weeks.

CASE X.—Typewriter, aged twenty-seven years. November 20: Anorexia, gastralgia, vomiting, constipation, vertical headaches, dizziness, nervousness, general bad temper, mucosa pale, hemic murmur in neck and second left intercostal space; hemoglobin, 49 per cent. Prescribed ovoferrin, tablespoonful in wine glass of water t. i. d. November 9: Appetite has returned, constipation relieved by tablespoonful dose of Epsom salts in full glass of hot water before breakfast; no gastric pain; hemoglobin, 61 per cent. November 16: No symptoms referable to the alimentary tract; temper has improved; hemoglobin, 76 per cent. November 23: No headache or dizziness, no hemic murmur; hemoglobin, 89 per cent. November 30: All symptoms are entirely relieved; hemoglobin, 93 per cent. Patient does not regard further medication as necessary.

CASE XI.—Housewife, aged thirty-six years. November 9: Has been recently curetted at the gynecological clinic for menorrhagia and metrorrhagia due to *endometritis fungosa*. Intense palor and frequent fainting; hemoglobin, 36 per cent. Double the usual amount of the iron prescribed. November 16: Feels much better, now has good appetite, fair color. Hemoglobin, 50 per cent. November 18: Has

had no fainting since last report, no hemic murmurs, appetite and color excellent; hemoglobin, 89 per cent.

CASE XII.—School girl, aged nine years. November 14: Has recently recovered from a severe attack of diphtheria. Has no appetite, swallows with difficulty, nausea, intense pallor of skin and mucous membrane, headache, joint pains, palpitation, faint feelings; urine: specific gravity 1026, marked trace of albumin, few epithelial casts; hemoglobin, 42 per cent. The adult dose of ovoferrin ordered. November 20: Color better, palpitation only on exertion, no faintness, nausea less; hemoglobin, 61 per cent. November 27: Appetite good, color good, no palpitation, headache better, swallowing still with some difficulty; pains in the joints have disappeared; urine: specific gravity 1022, no albumin, no casts; hemoglobin, 90 per cent. To continue the iron in the usual dose for children, and report in two weeks.

The marked increase in appetite and the betterment of the dyspeptic symptoms are noteworthy; in addition the signs of anemia as found in the circulatory system are demonstrably improved.

RECAPITULATION IN TABULAR FORM.

Case No.	Duration of treatment.	Hemoglobin Percentage.		
		Lowest.	Highest.	Increase.
5	6 weeks	43	97	54
6	6 "	51	98	47
7	7 "	54	89	35
8	5 "	51	97	46
9	4 "	39	91	52
10	3 "	40	95	46
11	2 "	46	89	53
12	2 "	42	99	46
Average duration of treatment.....				4.37 weeks
" increase of hemoglobin.....				47.37 per cent
" " of " percentage per week.....				10.82

The average weekly increase in hemoglobin percentage is remarkable when one considers that it was impossible to improve the hygienic conditions under which the patients lived. In private practice, where hygienic directions are followed, the results are much better.

For many years those investigators who have devoted the most time to research work concerning iron have contended that if chemists ever succeeded in producing what is unquestionably true organic iron, it would mark an important advance in the treatment of anemic condi-

tions; this prediction seems to have been fulfilled in the discovery of ovoferrin.

In conclusion, it can be definitely stated that true organic iron, of which ovoferrin is up to the present time the only representative, is the most satisfactory form of administering this important element because:

1. It is the exact chemical form for assimilation without change in the alimentary canal.
2. It is not dissociated by the gastric juice into the astringent iron chloride.
3. It does not interfere with digestion, but has a noticeable effect in increasing the appetite.
4. It does not irritate the alimentary canal.
5. Its effects in increasing the red corpuscles and the hemoglobin are constant, parallel and progressive.
6. It has, aside from its blood-forming effect, a demonstrable tonic and reconstructive action which can be explained only by a stimulating influence upon metabolism.

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NEW YORK, N. Y.

Progress

of

Medical and Surgical Science.

Autolysis in Lobar and Unresolved Pneumonia.—Among the alterations in structure and consistence, presumably autolytic in nature, Flexner would include those occurring in acute yellow atrophy, Zenker's degeneration, the softening of infarcted areas and in malignant tumors. Turning to the lung, he says that, while in croupous pneumonia autolytic action is plainly an important factor in resolution, in caseous pneumonia autolysis begins probably only when certain bacteria invade the necrotic areas. Reasoning from the probable fact that in many pathological conditions the leucocyte is the essential agent in bringing about absorption, the conclusion seems justified that an explanation of the facility of resolution in croupous pneumonia and the difficulty of the same process in caseous, lies largely in the relative absence of leucocytes in the tuberculous process and their presence in enormous numbers in the acute inflammatory condition. Based upon the assumption, broadly stated, that exudates and necrotic tissue are removed by absorption or organization (both of which processes may be included under autolysis) and the experimental fact that autolysis takes place quickly and perfectly in gray hepatization but slowly and in cases of unresolved pneumonia, the conclusion is drawn that while autolysis after death is a mark of the tendency during life for the exudate to become absorbed (abundance of leucocytes), the absence of autolysis in unresolved pneumonia is equally an indication of the fate of the exudate during life to undergo organization. The fact being the exudate in unresolved pneumonia is fibrinous rather than cellular and many of the alveoli are filled with dense hyalin fibrinous masses, the view seems a reasonable one that unresolved pneumonia is an acute lobar pneumonia in which the inflammatory exudate, either because of some disproportion between the leucocytes and other constituents or other cause as yet unknown, failing to autolyze perfectly, can not be absorbed, and hence undergoes organization.—*Boston Medical and Surgical Journal.*

Sodium Bicarbonate in Gastropathies and Other Diseases.—M. Henri Huchard, in a paper upon dyspepsia, deals at length with this therapeutic agent. In anorexia he believes it to be indicated in small doses (3 to 5 grains), since, taken a half hour before eating, it increases gastric secretion and excites the contractility of the stomach. In this connection he considers it far preferable to the bitters. In hyperchloridia, since here we have an excess of gastric secretion, the drug should be prescribed in large dosage at the end of the period of digestion, at about the time when the gastralgia is likely to appear—that is to say, about two or three hours after the meal. In this condition the author gives four or five drachms daily of the salt for several weeks at a time, and finds no resulting evil effects; on the contrary, oxidation and metabolism are favored, and an increase in body weight often takes place. The gastric crises of tabes, when these are accompanied by hypochlorhydria, respond well to sodium bicarbonate given in doses of five drachms per day. Also the drug produces excellent results in the migrainiform affection termed nervous gastrotoxia. Undoubtedly, when the drug is given improperly, various bad effects may follow; even anemia may be produced, but these results are not to be considered the fault of the alkali, but of the prescriber. Sodium bicarbonate is the remedy *par excellence* in diabetes, in the prevention of coma, which condition is characterized by a true acidemia. The dosage in this disease should be at least 2.5 drachms daily, and where coma actually exists as large a dose as three ounces may be given. In dermatoses, especially those of arthritic origin, alkaline medication has a distinct sphere, and in such conditions the bicarbonate is indicated in doses of three or four drachms per day. In biliary lithiasis and hepatic colic there is, in the author's experience, no surer cure than regular alkaline medication employed in massive doses.—*Revue de thérapeutiques*, 1903, No. 2, p. 37; *Progress of Medical Science*.

The Treatment of Thrush.—Dr. Merletti has found that the treatment of this affection by successive applications of hydrogen dioxide and sodium borate solutions is to be recommended. These two agents produce an abundant froth, which acts rapidly upon the *oidium albicans*. The author has employed this procedure in a great number of cases, and is convinced that, when repeated three times every twenty-four hours, it will bring about a cure, even in marked cases of the confluent type of the disease. If the treatment is instituted at the beginning of the affection two or three applications

are sufficient to stop the growth of the fungus.—*Journal de médecine de Paris*, 1904, No. 4, page 31; *Progress of Medical Science*.

The Use of Silver Foil to Prevent Adhesions in Brain Surgery.—

The use of this material is commended by M. L. Harris, who reviews the literature of the employment of this class of substances, and adds illustrative cases from his own experience. Regarding the technicalities of the method, he notes that the traumatism incident to the operation should be as slight as possible. A bone flap which can be replaced is preferable, when possible, to the trephine opening with the bone left out. Before the introduction of any substance hemorrhage should be perfectly controlled and all blood clots removed. The substance should extend well beyond the edge of the area involved in the adhesions. There should be no openings or breaks in the substance. The material must be one which can be sterilized. The wound must heal in a perfectly aseptic manner.—*Medical Record*.

The Clinical Significance of Pain in the Epigastrium.—Frank H.

Murdoch declares that pain in the epigastrium may be due to hyperacidity, hypersecretion, hyperesthesia of the stomach, nervous gastralgia, biliary colic, certain affections of the spinal cord, cancer, gastric ulcer, pancreatitis, some forms of appendicitis, and Addison's Disease. The pain of hyperacidity comes on one or two hours after meals, and ceases at the end of the digestive period. It may be temporarily relieved by the ingestion of food and alkalies. The pains of the periodic hypersecretion comes on suddenly in the midst of perfect health. Besides pain, there is extreme thirst and vomiting of large quantities of hot, sour gastric juice. In hyperesthesia of the stomach the pain appears immediately after eating. In nervous gastralgia the pain is intense, either sharply localized or diffuse. In biliary colic the attacks appear only at intervals, and have no relation to the taking of food. The attacks are sudden and are apt to be followed by jaundice. In cancer of the stomach, pain is the most constant of all the symptoms. It does not depend upon the taking of food. The pain of gastric ulcer usually comes on from ten to twenty minutes after the ingestion of food, and disappears at the completion of gastric digestion. There is often intense pain in the epigastrium in Addison's Disease. The weakness, however, characteristic of the disease appears before the pain.—*Medical Record*.

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Editorial.

One of the most commonly used and abused therapeutic agents that we have at our disposal is iron, and we would feign call attention to the fact that millions prescribe it, only hoping that it may have the desired effect, and at the same time many are disappointed or should be, for some inter-current, unfathomable condition or agent has more than likely wrought the desired benefit and had not the credit for the result. We are not as yet sure of the action of iron, but the two schools are not far from wrong. One, that inorganic iron may benefit; for an increase in the corpuscular elements of the blood as well as the hemoglobin has been noticed under its administration, whereas the excretion is in the same quantities as ingested, suggesting that its local presence increases metabolism of organic iron taken in as food; the other theory that organic iron is absorbed and stored in such organs as the liver, spleen and bone marrow until ready for utilization.

We, therefore, respectfully call attention to the article "The Present

Status of Iron Therapy," this issue, which admirably shows the benefit derived from the administration of organic iron. The former theory merits support also from other results obtained clinically and proven by blood count and hemoglobin estimation. A plea for more rational therapy is always in order in our present not perfectly enlightened state of knowledge, and the above mentioned food metal is not the only medicament that greater elaboration upon will be appreciated.

EDITORIAL NOTE.

Owing to the present editors not getting control of the JOURNAL until after the first of the year, and the JOURNAL as a consequence being a few days behind in its publication, the programme and proceedings of the " Louisville Medical Alumni " appear in this issue.

NOTICE.

The American Neurological Association has fixed the time of its meeting at St. Louis for September 15th, 16th and 17th, and this will be immediately followed by the sessions of the various medical departments of the Congress of Arts and Sciences, beginning September 19th.

Society Proceedings.

Report in abstract of the regular meeting of the Northwestern Branch of the Philadelphia County Medical Society, held March 10, 1904. Dr. Samuel Wolfe, President.

A GENITO-URINARY SYMPOSIUM.

Dr. H. R. Loux read a paper entitled, "The Local Treatment of Gonorrhoeic Infections."

Dr. Loux stated that, although a continuous service of eleven years in one of the largest genito-urinary clinics in America had afforded him unusual opportunities for observation, he had never written a paper upon the treatment of gonorrhea, because no method heretofore suggested proved, upon prolonged trial, to be an advance worthy of commendation. Clinical observation in thousands of cases convinced him that gonorrhea is too often grossly mis-treated. He deprecated the use of strong, irritating injections because they aggravate the disease and damage the urethra, and stated that treatment of acute anterior urethritis by irrigation is to be condemned because it causes an extension of the disease by continuity: he quoted statistics, reasons and authoritative statements to show that these opinions represented the beliefs of the leading and most conservative genito-urinary surgeons.

The speaker stated that during the past year and a half the results at his clinic at the Jefferson Hospital and in private practice had been much better than ever before; this statement he based upon the observation of several thousand cases of gonorrhea at all stages. The reasons for this improvement he ascribed to careful local treatment in which he abandoned, absolutely, the use of any drug as an injection which can cause the slightest irritation. Dr. Loux stated that, in a general way, his methods of treatment were as follows: For acute gonorrhea, he prescribes light diet, with very little meat, no fats, fruit or alcoholic beverages, but allows as much skimmed milk as the patient can drink. If the infection is confined to the anterior urethra, he prescribed the injection of two drachms of a 10 per cent. solution of argyrol, held in the urethra ten minutes; this injection is made in the morning, at noon and at night. Internally, he prescribes capsules of copaiba, cubebs and sandalwood three times daily. This treatment is practiced for one week, during which time the discharge will almost,

if not entirely, cease ; there will be no pain or irritation by the injection or upon urination, and the gonococci will disappear.

If, at the end of one week, the urine remains continuously shreddy, a weak solution of astringents is employed, and of these drugs he preferred zinc sulphate, iodide, chloride, hydrastin or berberine muriate, but emphasized that these astringents should not be used during the first week of the disease, and never in solutions sufficiently strong to produce pain or irritation.

If the two-glass test shows cloudy first and second portions of the urine, showing the presence of antero-posterior urethritis, he irrigates the anterior urethra with a warm solution of boracic acid in order to remove the accumulated secretions. Then he makes deep instillations of 20 per cent. argyrol solutions once daily or on alternate days ; the inflammation of the anterior urethra is treated in the manner already described.

The writer quoted from statistics of four hundred cases, treated since July, 1902, by the methods described, and stated the advantages as follows : Simplicity ; the relief afforded the patient from pain and irritation ; the extreme rarity of complications ; shortened duration of diseases, in that an average time required for cure in acute cases was twenty-one days, whereas, by the older methods practiced at the clinic and in private work, the best average obtainable was forty-two days.

Dr. Loux then discussed the treatment of gonorrhea in the female, the methods of which are best described by an illustrative case :

A. G., age twenty-one, came under observation June 5th, with acute vaginitis, endometritis and urethritis, for which she had been under treatment in New York for one week. Typical symptoms of gonorrhea were present ; microscopical examination positive. The vagina was dilated to full extent by means of speculum. To every portion of the vaginal mucous membrane a 50 per cent. argyrol solution was applied, and the same to the urethra by means of a cotton-tipped probe. The interior of the uterus was then freed of accumulated secretions by means of a cotton-wrapped applicator, after which the 50 per cent. argyrol solution was applied to the cervix and the body of the uterus. These applications are repeated two or three times, so as to fill the cavity with the solution. This local treatment was carried out every second or third day. After eight days no gonococci could be found. For home treatment the patient was ordered vaginal douches of from two to four quarts of hot boracic acid or normal salt solutions taken in the recumbent posture. On June 20th there was no discharge or other symptoms of

gonorrhea, and the patient was discharged. On June 29th she was attacked with acute appendicitis, for which he operated and removed a sloughing appendix. For the subsequent five weeks, during which she was in bed in the hospital recovering from the operation, he made observations every few days of her genito-urinary organs, and there was no symptom of gonorrhea. The patient made an uninterrupted recovery and left the hospital.

In discussing *chronic conditions*, which result from a neglected or improperly treated gonorrhea, Dr. Loux stated that care should be exercised in adapting methods and means to avoid irritating the already damaged urethral structures. He emphasized the necessity of making routine use of the endoscope and determine its nature.

Chronic follicular urethritis is readily recognized by endoscopic examination and by palpation of the enlarged follicles over a bougie, and is treated by gradual dilatation of the urethra by means of bougies, massage of the enlarged follicles, and by the local application of 25 to 50 per cent. argyrol solution to the individual enlarged follicles as revealed by the endoscope. This treatment is carried out three or four times a week, and is by far the most satisfactory method he had ever found.

Most cases of chronic gleet are due to ulcerative conditions of the urethra, and in the management of these the endoscope is indispensable. After determining the exact location of the individual ulcerations, the method of treatment depends upon whether the ulcerations are sharply localized, or whether there is a co-existent general hyperemia of the urethra. In the former case applications of 50 per cent. argyrol solution (through the endoscopic tube) to the ulcerations should be made at least three times a week. If general hyperemia exists, the use of mild astringents should precede the topical application of argyrol, in order to rid the urethra of the muco-purulent accumulations. From four to six weeks of this treatment, with care in the use of instruments, will heal the ulcerations and cure the gleet in the large majority of cases.

Another very common condition is the reduction in the lumen of the urethra by inflammatory exudate, occasioned by repeated attacks of gonorrhea or a primary case of long duration. In these cases endoscopic examination shows the seat of beginning stricture and the presence of more or less localized inflammation. The management of these cases is extremely important because of the certainty of the occurrence of organic stricture unless the patient agrees to a several

weeks' course of treatment. He should report every third or fourth day for the passage of bougies of gradually increasing size, followed, if active inflammation exists, by the deep instillation of topical application of 25 per cent. argyrol solution, depending upon whether the inflammation is circumscribed or more or less diffuse.

Dr. Loux summarized his paper as follows: Concerning acute gonorrhea: 1. He would strongly deprecate the treatment of acute anterior urethritis by means of irrigation, because of the danger of spreading the disease to the posterior urethra. 2. Irritating injections should never be used in acute gonorrhea because of the certainty of occurrence of a mixed infection and the extension of the disease, by contiguity, to the urethral follicles. 3. Argyrol, as a non-irritating gonococcide, with a specific effect in allaying the symptoms of inflammation, is the drug of choice for injection, and may be used in any strength and at any stage of the disease. 4. Astringents, such as zinc, hydrastin, bismuth and lead, should never be used in the acute stage of gonorrhea, but should be reserved for the post-gonococcus period when the urine remains shreddy. 5. These astringents should not be used in sufficient strength to cause the patient to experience pain or irritation.

To summarize concerning chronic gonorrhea: 1. Endoscopic diagnosis and treatment is indispensable as a routine measure. 2. Silver nitrate or other caustic or irritating applications or instillations should be seldom used, and then only in the most skilled hands and with the greatest care; otherwise, there are likely to occur structural changes in the urethra, predisposing to organic affections amenable only to surgical procedure.

The discussion of Dr. Loux's paper was opened by Dr. H. M. Christian. Dr. Christian complimented Dr. Loux upon the excellence of the paper read, and stated that the methods mentioned were, in the main, those practiced by himself. He stated that potassium permanganate is of no value in gonorrhea other than as a simple cleansing agent. Dr. Christian agreed with Dr. Loux that argyrol was undoubtedly the best gonococcide known to-day. After having used that silver salt continuously for more than two years, he prefers it because it never irritates, it is rapidly destructive to the gonococci, lessens the discharge and shortens the duration of the disease.

The speaker stated it must be borne in mind that we have to deal not only with the gonococci, but with the destructive action of the micro-organism as well; in other words, destruction of the gonococcus

does not by any means imply of necessity the cure of the disease, as there always remains a condition of catarrhal urethritis which requires a particular line of treatment. If a case of gonorrhea is seen in the early inflammatory stage, where ardor urinae and chordee are the most annoying subjective symptoms, Dr. Christian orders powders containing salol, sodium bromide, potassium bromide, each two and a half grains every two hours. At the same time a 5 per cent. solution of argyrol is to be used by the patient as a hand injection three or four times daily, the solution being held in the urethra for ten minutes. If the patient can spare the time, it is advisable to wash out the anterior urethra with several syringe-fuls of warm normal salt solution prior to using the argyrol injection; this line of treatment can be carried on through the second and third week. When the subjective symptoms subside, it is sometimes of considerable advantage to supplement the local treatment with the use internally of copoba and sandalwood oil. Ordinarily, at the beginning of the third week, the patient enters upon the stage of decline, or, as Professor Finger styles it, the "crucious terminal stage" of the disease. In a case going on to recovery, the discharge is now scanty, then muco-purulent in character, and containing few, if any, gonococci, and this is by far the most important stage in the treatment of the disease as regards the patient's future welfare; it is here that experience teaches that we need more than a mere gonococcidic agent. We need here, in addition, mild astringent lotions to help restore the integrity of the damaged mucous membrane. A good plan now is to use a 5 per cent. solution of argyrol night and morning, employing through the day some such astringents as zinc, bismuth, hydrocort. lead, berberine, etc. At the beginning of the fifth week, when nothing remains but the well known "morning drop," and the urine is clear, but contains shreds, it is well to use the argyrol solution at night, and to use once or twice through the day one of the well known astringent mixtures.

If in the second or third week the clinical symptoms and the two-glass test show involvement of the whole urethra, the treatment by hand injections is temporarily abandoned. Deep instillations of 10 per cent. solutions of argyrol are then employed at short intervals until such time as the second urine becomes clear.

This, in general, is the line of treatment that the speaker had used at the University of Pennsylvania and his other clinics for the past two years, and is one that has given more satisfactory results than any hitherto employed.

Dr. Orville Horwitz condemned the irrigation treatment of gonorrhea, and summarized his opinions as follows: The irrigation method of treatment will not abort acute specific urethritis; chronic urethritis and involvement of the deep sexual organs are common sequences: in many instances, in order to effect a cure in the terminal stage of the disease, the irrigation must be discontinued, and other methods of treatment employed; irrigation should not be employed in the acute stage of specific urethritis; irrigation of the deep urethra by means of hydrostatic pressure is injurious in the majority of cases of acute gonorrhea, and is conducive to the development of complications; the best treatment we have to-day for gonorrhea is that by means of injection of argyrol solutions, which are strongly antiseptic and non-irritating.

Dr. R. O. Kevin prefaced his remarks with the statement of the French surgeon, Ricord, that "a clap begins and God alone knows when it will end." Fortunately, however, this statement is not as true as it was a few years ago. Dr. Kevin stated that with the use of 20 per cent. argyrol solution he had been able to cure 85 per cent. of his acute cases in from two to four weeks. He quoted Purdy, of London, who stated that since the introduction of argyrol into the enormous clinic at the London Lock Hospital, 72 per cent. of the early cases had been cured within a month, and there had been no relapses after six weeks. Dr. Kevin had been associated with Dr. Loux for several years at the clinic, and could corroborate his conclusions. The speaker stated that he had seen so many acute cases cut short that he always practiced the abortive method when possible. This method is as follows: If the patient presents himself during the first forty-eight hours of an attack of gonorrhea, the anterior urethra is washed out with warm water or normal salt solution. Then two drachms of 20 per cent. argyrol solution is injected into the anterior urethra and held there for ten minutes; this injection is repeated by the patient every three hours, night and day, for three days. Even if this method does not abort the disease, it always effects a cure in a shortened period, and affords the patient entire freedom from the pain and irritation usually present in an early gonorrhea. If by this means the disease does not show signs of being aborted, Dr. Kevin practices the same methods mentioned by Dr. Loux.

Dr. Orville Horwitz read a paper entitled, "The Radical Cure of Senile Hypertrophy of the Prostate; Based Upon a Study of 145 Operations Performed by the Author."

Dr. Horwitz stated that the question under discussion has, with the possible exception of appendicitis, attracted more attention in the surgical world than any other subject. It is well recognized that the danger to the patient with enlarged prostate begins as soon as it is necessary to resort to the daily use of the catheter, and when this period arrives a surgeon should be consulted to supervise the case, and decide what operative measures are desirable or necessary. It was emphasized that no one operation was suitable to all cases, and that each patient is a law unto himself in the matter of choice of operation.

The two operations which have stood the test of experience are prostatotomy by means of the galvano-cautery (the so-called Bottini operation) and prostatectomy. The speaker stated that the Bottini operation is extremely valuable, safe and always to be preferred to cutting operations in suitable cases. Out of ninety-cases operated upon by the author, by the Bottini method, three died, two of uremia and one of sepsis; all three were very old men. Twelve cases were lost sight of after leaving the hospital, but were much improved when last examined. This leaves eighty-one cases concerning which there was obtained definite knowledge as to results. The ages of the patients varied between fifty-two and eighty-one years. The speaker stated that his statistics proved conclusively that the earlier the patient submitted to operation the better the results. Of the total 81 Bottini operations all the patients were either entirely cured or very much benefited; four required second operation, and a considerable proportion were treated for several months subsequently for accompanying chronic cystitis.

Prostatectomy, the speaker stated, is regarded as a valuable operation, but authorities differ as to when and how it is to be performed. As many as twenty different operations have been suggested. Here, too, the individual case decides methods, choice of operation, etc. The prostatectomies performed by the author were as follows: Three complete (suprapubic incision), seven partial prostatectomies (suprapubic and perineal incision), thirty-four complete perineal prostatectomies.

Of the nine complete suprapubic operations, two died, one of suppression of urine, one of uremia. In all the cases convalescence was slow; in five cases the ultimate results were all that could be desired.

Of the thirty-four perineal prostatectomies, six died from uremia, sepsis or shock; six cases were lost sight of after leaving the hospital:

sixteen were cured, four markedly benefited, one unimproved.

Dr. Horwitz summarized the results of observations in his 145 operations as follows :

1. A routine method is not applicable to the treatment of prostatic hypertrophy ; every case is a law unto itself, and the treatment will depend on the various conditions presented in each individual case.

2. The dangers attendant on the daily catheterism are greater than those of a radical operation performed at the onset of the symptoms caused by the obstruction.

3. The proper time to perform a radical operation is reached as soon as it becomes necessary for a patient to resort to daily catheterism.

4. The gratifying results obtained by a number of the operations in many cases demonstrates that the Bottini operation is one of great surgical value. It is applicable to a large percentage of cases, which, if properly selected, has proved to be the safest and best method of relieving an obstruction caused by prostatic hypertrophy. In those cases in which a stone in the bladder is associated with a prostatic enlargement, lithoplaxy may be performed in conjunction with a galvano-cautery prostatotomy.

5. A complete prostatectomy is justifiable if performed early before the individual is broken down in health and secondary complications have supervened. In early operation the results are most satisfactory, recovery rapid, the mortality varying between 5 per cent. and 7 per cent.

6. A complete prostatectomy in feeble, elderly patients, with long standing obstruction and secondary complication, the prognosis is grave, and the mortality ranges between 15 per cent. and 18 per cent. If the bladder in these cases happens to be hopelessly disabled, the results obtained by the operation are negative. Cases of this description are only suitable for suprapubic drainage.

7. In 90 per cent. of all cases the gland can be readily removed by means of a median perineal incision. The perineal operation recommended by Bryson is considered the operation of choice.

8. Complete suprapubic prostatectomy is shown to be more dangerous than the perineal operation for obvious reasons. A suprapubic prostatectomy is safer if combined with perineal drainage.

9. Partial suprapubic prostatectomy is indicated in such cases as where a valve-like lobe exists which interferes with urination, or where there is a partial hypertrophy of one of the lobes.

10. A perineal prostatectomy is best suited for those cases where

the enlargement of the lateral lobes has a tendency to progress towards the rectum, to obstruct the urethra, or projects backwards into the bladder.

11. A prostatectomy is always attended with more danger than the Bottini operation, and the convalescence is more prolonged. In suitable cases the latter operation is, therefore, the one of choice.

Dr. Edward Martin discussed the preceding paper as follows :

He agreed with Dr. Horwitz that if operation has been advised and consented to, the circumstances of the individual case decided which of the several operations is to be performed. He believed that the Bottini operation has proved of great value, and is preferable to cutting operations in suitable cases. He did not, however, advise operation in all cases of enlarged prostate. He recognized the inconveniences and dangers attendant upon the daily use of the catheter, but believed in the value of palliative measures in the majority of cases. He recommended care in the selection of catheters, and chose one that enters the bladder with the least force and with the least pain to the patient. If a soft rubber catheter can not be introduced, a woven elbowed one is to be chosen. If obstruction or spasm necessitates habitual resort to a metal catheter, surgical intervention is required. When patients use the instrument upon themselves, the hands should be washed thoroughly, dipped in bichloride solution, the meatus washed with the same solution and be provided with an irrigating bag containing one pint of hot argyrol solution, 1 to 1000. Infection of the bladder is commonly present, and should be treated by means of bladder irrigations. For this purpose a fountain syringe supplied with a catheter should be suspended two feet above the level of the bladder. The anterior urethra is first thoroughly flushed, after which the catheter is pushed into the bladder and the urine withdrawn. The flushing of the bladder is continued until the return flow no longer contains pus or mucus. The temperature of the argyrol solution employed should be of the temperature of the body or a little above it. When practicable this antiseptic flushing should be done each time the catheter is passed. If this treatment is inefficacious, continuous catheterization becomes necessary. For this purpose a large rubber catheter, or a self-retaining one, is selected and the antiseptic solution introduced; if the catheter is properly introduced, the entire amount of the solution will return. Twice a day the urethra and bladder are thoroughly filled with the antiseptic solution, the catheter being withdrawn far enough to allow the injected fluid to escape from the meatus.

and then being pushed back into its former position.

The success of this treatment depends upon securing free and continuous drainage, and this is incident to the permeability of the catheter and its retention in the proper position. When skillfully applied, it is one of the safest and most successful means of treating cystitis, which so frequently complicates obstruction from prostatic enlargement.

REUNION OF THE ALUMNI ASSOCIATION OF THE LOUISVILLE MEDICAL COLLEGE.

On March the 24th, in the large lecture room of the Louisville Medical College, the third and by far the largest and most successful meeting of the alumni of that institution took place.

The business session was called to order at 2 o'clock P. M. by the President, Dr. W. B. McClure, of Lexington, and the election of officers for the ensuing year resulted in the following well known men being elected :

Dr. H. E. McKay, of Bardstown, Ky., President.

Dr. J. C. B. Foster, of Monterey, First Vice President.

Dr. A. J. McDonald, of Bedford, Ind., Second Vice President.

Dr. T. J. Hower, of Cropper, Ky., Third Vice President.

Dr. Ad. O. Pfingst, of Louisville, Ky., Secretary and Treasurer.

After which the following papers were read and discussed :

"Catarrhal Conditions of the Upper Air Tract in Children, by Dr. B. F. Travis, class of 1871, Chattanooga, Tenn.

"Climatic Influences on the Catarrhal Condition of the Nose and Throat, by Dr. Wm. Burgess, of the class of 1882, San Antonio, Texas.

"Measles," by Dr. F. A. Miller, class of 1885, Owensboro, Ky.

"Success in the Practice of Medicine," by Dr. E. M. Foster, class of 1892, Portsmouth, Ohio.

"Rheumatism," by Dr. S. B. Rose, class of 1894, Evansville, Ind.

"Pneumonia and Its Treatment," by Dr. S. P. Oldham, class of 1897, Sorgho, Ky.

"Ether Anesthesia," by Dr. Lindsey Ireland, class of 1894, Louisville, Ky.

"The Surgical Aspects of Gonorrhea," by Dr. A. David Willmoth, class of 1896, Louisville, Ky.

At 6:15 o'clock the business session adjourned to meet at 8:30 o'clock

at the Galt House for the reception and banquet. This was a very enjoyable affair, and one that all could not help but wish that it came oftener than once a year. The Dean of the Faculty, Dr. C. W. Kelly, presided as Toast Master, and it is needless to say that he filled the place with as much credit to himself as he does the Chair of Anatomy at the college.

The following toasts were responded to:

"Those Good Old Days," Dr. J. H. Harris.

"The Student and His Grievances," Dr. C. W. Dowden.

"Our Friends, the Enemy," Dr. J. A. Flexner.

"Rambling Thoughts," Dr. W. B. McClure.

"Experiences," Dr. Irvin Abell.

"Dotes and Antidotes," Dr. Harris Kelly.

On March 25th, at Macauley's Theatre, the commencement exercises were held, and a large class received their diplomas.

**PRELIMINARY PROGRAMME OF THE SEVENTH ANNUAL
MEETING OF THE AMERICAN GASTRO-ENTEROLOGICAL
ASSOCIATION TO BE HELD AT HADDON HALL,
ATLANTIC CITY, N. J., JUNE 6, 7, 1904.**

Monday, June 6th—Morning Session, 10 A. M.

SYMPOSIUM OF GASTRIC ULCER.

Introduction (15 minutes)—J. C. Hemeter, Baltimore, Md.

Bibliography (15 minutes)—Charles D. Aaron, Detroit, Mich.

Pathologic Anatomy (20 minutes)—Harlow Brooks, New York.

Pathogenesis (20 minutes)—W. G. McCallum, Baltimore, Md.

Incidents of Gastric Ulcer in the United States (20 minutes)—Campbell Howard, Baltimore, Md.

Gastric Ulcer in Children (15 minutes)—E. G. Cutler, Boston, Mass.

Discussion (30 minutes).

Afternoon Session, 2:30 P. M.

CONTINUATION OF DISCUSSION.

Symptomatology and Course (20 minutes)—Max Einhorn, New York.

Atypical Forms (15 minutes)—G. W. McCaskey, Fort Wayne, Ind.

Complications and Sequela (15 minutes)—M. Manges, New York.

Condition of Blood and Urine (15 minutes)—T. Fitcher, Baltimore, Md.

Differential Diagnosis (20 minutes)—H. W. Bettman, Cincinnati, Ohio.

Further remarks on the Use of Orthotom in the Diagnosis of Gastric Ulcer (15 minutes)—

F. H. Marshall, Pottsville, Pa.

Discussion (30 minutes).

Tuesday, June 7th—Morning Session, 9:30 A. M.

CONTINUATION OF SYMPOSIUM.

Medical Treatment [20 minutes]—S. W. Lambert, Texas.

Surgical Treatment [20 minutes]—Joseph A. Blake, New York.

Classification of Gastric Ulceration and Hemorrhage.

Report of Case of Perforating Angiosclerotic

Gastric Ulcer [15 minutes]—A. L. Benedict, Buffalo, N. Y.

DISCUSSION [30 minutes].

PAPERS.

Concerning Heterochylia [20 minutes]—J. C. Hemeter, Baltimore, Md.

Discussions limited to five minutes.

It is requested that those wishing their names placed on the programme for discussion notify the Secretary.

The Annual Dinner will take place on the evening
of June 6th, at 7:30 P. M.**REGULAR MEETING MULdraugh HILL MEDICAL SOCIETY,
ELIZABETHTOWN, KY., THURSDAY, APRIL 14, 1904.***Morning Session.*

Reading of the minutes of the previous meeting.

Report of committees.

Unfinished business.

Report of clinical cases.

SYMPOSIUM ON DIPHTHERIA.

Etiology and Pathology of Diphtheria, by Dr. Ben L. Bruner, Hardyville, Ky.

Discussion opened by Dr. F. P. Strickler, Elizabethtown, Ky., and Dr. H. K. Nuzz,
Cecelia, Ky.

Symptomatology and Diagnosis of Diphtheria, by Dr. T. L. Poteet, Hodgenville, Ky.

Discussion opened by Dr. McKay, Bardstown, Ky., and Dr. H. T. Duvall, Millwood, Ky.

Afternoon Session.

Complications and Sequela, by Dr. J. C. Mobley, Elizabethtown, Ky.

Discussion opened by Dr. W. H. Strother, Big Spring, Ky., and Dr. J. D. Howell, Vine
Grove, Ky.

Prognosis and Treatment of Diphtheria, by Dr. W. F. Bogges, Louisville, Ky.

Discussion opened by Dr. Ed. Smith, Hodgenville, Ky., and Dr. Sam. Stith, Ekron, Ky.

Undeveloped Testicle Report of a Case, by Dr. James B. Bullitt, Louisville, Ky.

Discussion opened by Dr. Adams, Munfordsville, Ky., and Dr. McChord, Lebanon, Ky.

Report of Some Interesting Medical Cases, by C. Z. Aud, Cecelia, Ky., and Dr. J. T.
Green, Leitchfield, Ky.

Medical Gynecology—What It Offers, by Dr. Fred. L. Koontz, Louisville, Ky.

Discussion opened by Dr. J. L. Atkinson, Cambellsville, Ky., and Dr. W. E. Gardner,
Glendale, Ky.Dr. D. C. Bowen, Nolin, Ky., President; Dr. A. David Willmoth, Louisville, Ky.,
Secretary.

Health Report.

CHICAGO HEALTH REPORT.

The decrease of child mortality from the decreased prevalence of the essentially air-borne diseases is, indeed, remarkable—even the acute intestinal diseases of the young show a considerable reduction, probably due to a relative freedom from the milk-polluting agencies usually carried in dust.

A comparison of the figures for the first 79 days of 1904 with those of the corresponding period of 1903 affords material comfort to the Department :

	1904.	1903.
Total deaths	6,577	6,954
Under 1 year of age.....	1,192	1,221
Between 1 and 5 years.....	499	722
Diseases affecting child life:		
Acute intestinal.....	221	243
Diphtheria	99	118
Influenza.....	62	92
Measles	2	61
Scarlet fever	53	90
Whooping cough.	4	102

These figures show a decrease in 1904 from 1903 of 12.9 per cent. in the mortality of all under 5 years of age and of 30 per cent. of those between 1 and 5 years—the age-periods of greatest mortality. On the other hand, the decrease of all-ages deaths is only 5.4 per cent. and of those over 5 years it is but 2.4 per cent.—a discrepancy due to the prevalence of pneumonia and increasing deaths from consumption, cancer, Bright's Disease and heart diseases.

As to the "pneumonia death" rate, it can hardly be said to be "increasing," at least here or in New York. The 388 pneumonia deaths reported in New York during the week and the 137 reported in Chicago are about the average for several weeks. The comparative figures for the two cities, between November 1, 1903, and March 19, 1904, follow :

	New York.	Chicago.
Total deaths, all causes.....	29,681	11,306
Deaths from consumption.....	3,314	1,124
Deaths from pneumonia	6,338	2,450
Proportion, per cent. of all deaths		
From consumption.....	11.1	9.9
From pneumonia.....	21.4	21.6

Statement of mortality for the week ended March 19, 1904, compared with the preceding week and with the corresponding week of

1903. Death rates computed on estimated mid-year populations of 1,950,000 for 1904 and of 1,820,000 for 1903 :

	Mch. 19, 1904.	Mch. 12, 1904.	Mch. 21, 1903.
Total deaths, all causes....	578	549	612
Annual death rate per 1,000.	15.44	14.75	16.92
By sexes—			
Males.....	338	331	369
Females.....	240	218	243
By ages—			
Under 1 year.....	103	99	109
Between 1 and 5 years.....	35	41	64
Over 60 years.....	122	126	125
Important causes of death—			
Acute intestinal diseases....	14	20	21
Apoplexy	24	10	9
Bright's Disease.....	24	38	34
Bronchitis	22	21	27
Consumption.....	74	86	62
Cancer.....	22	24	26
Convulsions	19	15	14
Diphtheria	10	6	6
Heart disease.....	32	32	44
Influenza	2	3	13
Measles.....	0	1	4
Nervous diseases.....	28	14	28
Pneumonia.....	137	127	133
Scarlet fever.....	5	4	8
Small-pox	0	0	2
Suicide.....	7	5	14
Typhoid fever.....	7	9	13
Violence (other than suicide)	26	20	26
Whooping cough.....	2	0	11

LOUISVILLE HEALTH REPORT.

Health report of the city of Louisville, Ky., from March 8 to and including March 22, 1904 :

Scarlet fever.....	9	0
Diphtheria	5	0
Whooping cough.....	0	0
Typhoid	19	3
Tuberculosis.....	16	22
Small-pox.....	0	0

Seventy-one cases of small-pox reported during same period last year ; no deaths.

Thirty-one cases of diphtheria reported during same period last year ; two deaths.

March 5th, last small-pox case reported for seventeen days.

M. K. ALLEN, M.D., *Health Officer.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

VOL. XXXVII.

LOUISVILLE, KY., APRIL 1, 1904.

No. 145.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. RUSKIN.

Original Articles.

GASTRIC AND DUODENAL ULCER.*

BY WILLIAM H. WATHEN, A.M., M.D., LL.D.

Professor of Abdominal Surgery and Gynecology in the Kentucky School of Medicine, Fellow of the American Gynecological Society, Surgeon to the Kentucky School of Medicine Hospital, St. Anthony's Hospital and the Louisville City Hospital, Louisville, Ky.

The medical profession is now becoming alive to the importance of early diagnosis and timely surgical treatment in gastric and duodenal ulcers and their varied complications. We have learned that many cases of chronic dyspepsia that have derived no permanent benefit under the internal medicine treatment are often cases of chronic gastric ulcer, with or without complications, that can only be relieved by surgical treatment, and if not so relieved may finally result in cancer. Necropsies show that about 5 per cent. have active gastric ulcer or the scar of an old one, with frequent perigastric adhesions, and that about 2 per cent. of all deaths are caused by gastric cancer, and that between 35 and 45 per cent. of all cancers are in the stomach; hence we see the frequency of these diseases, and the necessity of timely interference if this will give any immediate or subsequent relief, and will prevent the development of cancer. In 145 operations by Mayo for malignant diseases of the stomach, previous gastric ulcer was demonstrated in about 60 per cent., and this is probably a low estimate. A cancer seems to be implanted in the epithelial structures at the base

* Read before the Louisville Clinical Society, March 22nd, 1904.

of the ulcer or in the cicatrix, the bad nutrition resulting from these conditions greatly destroying the resisting powers of the stomach to the invasion of the cancer.

Gastric ulcer may be classed as acute, subacute and chronic, the chronic being the later result of acute or subacute. Acute ulcer may exist without causing any well marked symptoms, and may imperceptibly pass into a chronic ulcer; or at any stage of its existence there may be alarming hemorrhage with profound shock, the blood being vomited from the stomach and passed from the bowels. While the symptoms from this excessive hemorrhage are alarming, the patients will promptly recover from the shock, and it is surprising how quickly they regain their previous healthy appearance. The hemorrhage may recur one or several times, but only in exceptional instances does it continue long enough to cause fatal results, and if the ulcer passes into the chronic form the hemorrhage has previously ceased. It is exceptional that hemorrhage in acute gastric ulcer requires the aid of a surgeon, and the patient needs only to be kept quiet and the stomach empty, giving nourishment, if needed, by enema. A more serious complication in both gastric and duodenal acute ulcer is perforation, which is fortunately not frequent. In the acute form the ulcer is large, the tissue giving way almost suddenly, followed by intense pain and profound shock, with rapid pulse and board-like hardness over the recti muscles. This condition demands immediate surgical interference which may frequently save the life of a patient who would otherwise have promptly died. An exploration in the median line above the umbilicus or a little distance away upon the right side through the rectus muscle will reveal the condition, and the ulcer may be quickly sutured. This is best done by first introducing one or two catgut sutures through the wall upon each side of the ulcer, supplemented by an overlay of interrupted or continuous silk suture. In large duodenal ulcer, the suturing should be in a direction that will cause the least constriction of the bowel. Without operation these patients die, but if operated upon promptly, and the infection be not streptococcic, they may recover, though the peritonitis be diffuse, and possibly where the germ is virulently pathogenic, but the operation performed with only localized infection, recovery may also follow. Purulent accumulations and stomach contents should be gently sponged from the upper abdominal cavity, but sponging of the entire abdominal cavity, or saline irrigation will probably be of no benefit, and may so impair the resistance of the endothelium as to encourage rather than prevent bacterial growth;

hence we had better drain the cavity low down by a stab wound above the pubes, through which a tube is introduced into the utero rectal pouch in the woman and the vesico rectal pouch in the man.

Cases of diffuse suppurative peritonitis following gastric ulcer successfully treated by this method have recently been reported. Perforation in the subacute ulcer may have but few premonitory symptoms, and may be about as sudden as in acute ulcer, but the opening being small the shock is less, and there is seldom any considerable pouring out of stomach contents into the peritoneal cavity because of rapid adhesions and the plugging of the opening by inflammatory exudation; hence most of these patients recover from the immediate effects of the perforation without surgical interference, but have extensive perigastric adhesions that later interfere with the normal motility of the stomach.

In subacute ulcer hemorrhage is not the well marked symptom that we find in acute ulcer, and the perforation may occur without any knowledge of previous hemorrhage. In the chronic ulcer there may be no hemorrhage, but occasionally there is a fatal hemorrhage, the result of an erosion of a gastric or perigastric artery. We can not judge from statistics of gastric ulcer whether the ulcer is more frequent in the anterior or the posterior wall of the stomach, and the same applies to perforation; but if the perforation be posterior, the contiguity of the peritoneal surfaces admit of rapid adhesions, so that there may be no extravasation except into the retro peritoneal tissues, which may result in subfrenic abscess.

The number of cases in acute or subacute ulcer requiring surgical treatment for hemorrhage or perforation are relatively few compared with the cases of chronic ulcer with its associated complications. As the ulcer is found in nearly 75 per cent. of cases at the pyloric end of the stomach, we have resulting an obstruction to the normal stomach drainage into the duodenum, because of spasmodic contraction or organic stenosis in the pylorus. As a result we have retention of food, which may become decomposed and offensive, and cause frequent vomiting, with pain in the region of the pylorus, and sometimes **extending over other parts of the stomach.**

The symptoms of pyloric obstruction may be magnified by organic contraction of other parts of the stomach, or by perigastric bands, either of which may result in a condition known as hour-glass contraction of the stomach, dividing the organ into two or three saculi. It will thus be seen that the normal physics of the stomach

have been so greatly changed as to enable us to place more emphasis upon this condition than upon chemical analysis of stomach contents in diagnosis. Hence, in deciding upon the conditions indicating the necessity for surgical treatment, we will gain much more from the physical than from the chemical examinations. While hyperacidity is supposed to be the principal cause of gastric ulcer, we may have chronic ulceration with either hyperchlohydria or hypochlohydria, or with a normal acidity; and while acidity may be greatly diminished or absent in cancer of the stomach, it is sometimes found practically normal, and there are cases of chronic gastric ulcer where the same is practically true. At best stomach chemical analysis can only be supplemental to the physical examination. Vomiting and pain are the symptoms that first direct our attention to obstruction, but if the obstruction is at all extensive, we often find some food in the stomach early in the morning, no food having been taken for eight or ten hours. If food be found in the stomach under these conditions with any degree of regularity, then the diagnosis of obstruction is usually positive. This can be easily tested by a stomach tube. Dilatation of the stomach, with or without hour-glass contraction, may be outlined by cleansing the stomach of all contents and dilating it gradually with air through a bulb syringe, carefully watching the distention as the air enters. Other methods of dilatation are less satisfactory and in a degree dangerous. If there be hour-glass contraction, with the stomach comparatively empty, we may diagnose the condition by filling the stomach with water and in a little while removing it through a tube. It will be found that all the water introduced into the stomach can not be taken away, sometimes quite a deal of it remaining. After waiting a little while longer we may again introduce the tube and remove from the stomach offensive smelling contents, which have returned from the pyloric sacculus into the cardiac end, the amount being in proportion to the capacity of the pyloric sacculus, and the degree of contraction of the opening connecting the saculi.

As the symptoms in chronic ulcer are mainly caused by imperfect drainage, we should judge that any operation that will give free drainage would be followed by excellent results, and experience has demonstrated this to be true. It is the only successful method in the treatment of the ulcer, or hemorrhage that can not be otherwise controlled, and where there is not organic stenosis at the pylorus the ulcer usually heals, and finally the food begins to pass with but little interruption into the duodenum. Theoretically, it would appear that

drainage should be established, if possible, by some operation that would enlarge the pyloric opening, or that would drain the pyloric end of the stomach into the upper part of the duodenum, but experience has shown that better results are obtained by draining from the lower part of the body of the stomach into the jejunum by a gastro-enterostomy. Heineke-Miculicz pyloroplasty, with its modifications, has seldom given permanent results, and gastro-duodenostomy has not been usually successful. Probably the most logical of the operations connecting the pylorus with the duodenum is that of Finny, but this operation has been performed but a few times, and the cases are so recent that further time is needed to judge of its results. There are difficulties to contend with in the gastro-jejunal drainage, and by the old methods many of the patients died because of the *vicious circle*, and even now where the food begins to pass freely through the pyloric end of the stomach, the opening at the best becomes quite small or occluded, and we may have an impeded peristalsis in the jejunum which may cause trouble. By the most modern methods of making the anastomoses at the bottom of the stomach, either just in front or behind the gastro-colic omentum, we not only get perfect drainage, but usually prevent the vicious circle, and dispense with an anastomosis between the afferent and the efferent limbs of the loop. Some of our best and most successful operators prefer the anterior anastomosis, while others prefer the posterior, and recent statistics seem to indicate a lower mortality in the posterior method. If the operation of Miculicz by which he attempts to eliminate the *vicious circle* by anastomosing the stomach to the bowel at three or four inches from its emergence under the meso-colon, and upon a level with this point, meets with a continued success, it may become the operation of election. In the posterior anastomosis, both the Murphy button and the sutures have been used, but the operation can probably be performed more easily by the button. The stomach is brought through an opening in the meso-colon, but we must be careful to cut as little as possible, and avoid the arteries in the mesentery, and especially the middle colic artery, for its division would probably cause fatal gangrene. In the anterior anastomosis Murphy uses the button, but the majority of operators dispense with it, and unite the bowel to the stomach by the suture, after one of several methods that have been practiced. The simplest and the quickest method is by the McGraw ligature, and if time proves that the gastro-jejunal opening is as large by this method as by other methods it may be generally accepted.

The immediate mortality would then be less than by any other method because of the rapidity of the operation and the prevention of infection by soiling from bowel or stomach by leakage during the operation.

LOUISVILLE, KY.

GONORRHEA FROM A SURGICAL STANDPOINT.*

BY A. D. WILLMOTH, M.D.

*Professor of Surgery and Instructor in Laboratory of Surgery in Kentucky School of Medicine,
Visiting Surgeon to Louisville City Hospital and Kentucky
School of Medicine Hospital.*

It is not my intention to bring before you any new ideas as to the etiology and pathology of this common affection, or to advance any new line of treatment, either for the disease *per se*, or for its many complications. But it will be my greatest effort during the short space of time that I have at my command to ask your kind indulgence in considering with me, not so much the disease itself, but its many complications, which we both as physicians and surgeons are called in to treat. It may be surprising to some of you at least when I say that though the disease is as old as the human race itself, and numbers its victims by the thousands each year, we are yet a long ways from a cure for it. How strange this seems for such a simple malady as many are pleased to term it; for it is a well known fact that many diseases, both physical and surgical, have been robbed of their terror during the last fifty years by the rapid advancements along the lines of medical and surgical science, but with the one under consideration the surgeon continues to see just as many, if not more, complications than were seen years ago.

We see so many sad cases of young girls who date their pelvic infection back to their marriage week, and, if nothing else, remain sterile all their lives, that we are forced to say that it is a lamentable fact that there is no disease of such common occurrence and so little understood. The first question that we wish to consider that among the many thousand women who lose their power of conception, their health, and, I am sorry to say, their lives from its dire effects, are not confined to the base, criminal and outlaw classes, but are too frequently valuable and innocent ones in the highest walks of life.

This is due to two causes: First, the great prevalence of the

disease ; and, second, the time required to get cured when once infected. In looking over the statistics, as compiled by health officers and superintendents of police, who make reports on this subject from over thirty of our large cities, it is found that over three hundred thousand women in this country alone are leading the lives of prostitutes, and for every one who regularly resides in a house of ill-fame, there is at least one, if not more, just as bad who never become known to the public. From these figures we are startled with the fact that there are at least one-half million candidates for this disease in the United States, and when we take the world at large, as we do in estimating other diseases, it is safe to say that those who have the disease to-day, or liable to have it to-morrow, or next week, may fairly be reckoned by the millions.

It is also a fact that the disease carries off annually 40,000 prostitutes alone, and has reduced their average length of life from the time they began a life of prostitution to that of five years. There is, of course, to be deducted from this the small per cent. who die from the effects of dissipation. Many writers, among whom are Lawson Taite, Williams, Sanger and Lomer, place the per cent. at from 25 to 90 of the abdominal sections that are required on account of the complications of gonorrhea, a safe average being at least 50 per cent. Only one cause has been considered, viz. : that of prevalence, and it depending on the other, which is the length of time required to get entirely cured when once infected. Ricord was not far from right when he said, " Anybody can tell when a gonorrhea begins, but God alone knows when it will end," and the same author, at a banquet in Paris, when the speech making time had arrived, and he was called on by the toastmaster to give his views as to what punishment would be given to such unfortunate sinners as failed to escape hell, briefly said, as for himself no greater punishment could be meted out than to require him to view and hear the accusations of the many he had failed to permanently cure of gonorrhea.

Such statements as these cause us to say without fear of criticism that our treatment (and I may say our advice) to these patients needs revision, for it is a well known fact that because the long prayed for time has come, when the discharge has ceased, that the patient is not well, but merely lapsed into that latent stage, and many instances are now on record where the most direful results have followed the marriage of men who had suffered no discharge or pain for months before their marriage.

For the chief power of the gonococcus for harm lies in the lasting

vitality of the germ after an apparent cure ("Dudley's Gynecology," second edition, page 155) ; for we all know that the gonococcus, like many other bacteria, may lie in a dormant state for months or even years, and when transplanted may regain its full reproductive capacity, and it has been proven by Wertheim that the latent gonococci may remain for years hidden away behind a stricture in a urethra that had become more or less acclimated, as it were, to their presence there, and to whose mucous membrane they were not an irritant, but when planted on a germ-free urethral or vaginal mucous membrane, which serves to them a fertile field, they would again take on an active and virulent state, and if now they be transplanted back into the original field from which they were taken, they will produce a fresh attack of virulent nature ; or, in other words, by passing them through a new culture ground, they become vulnerable to the urethra that was invulnerable to them before. This enables us to explain those cases of acute attacks that occur in patients who had otherwise thought themselves cured, but after marriage an acute attack showed itself ; by infecting the innocent one they themselves become reinfected.

There is not much difference of opinion now and what was held in 1876, when Noeggerath wrote his essay on "Latent Gonorrhea," in which he made the statement that many cases of gonorrhea in males were never cured, and Drs. Keersmecker and Verhoogen say in their book on "Chronic Urethritis of Gonorrheal Origin," which was published only three or four years ago, that there is ample ground for the pessimistic belief of Behrand that gonorrhea is practically incurable in the female, and they raise and emphasize the point as to when we can say that a case is cured. A moment's reflection will convince the most skeptical that there are very few, if any, diseases characterized by so many pathological possibilities as gonorrhea. Many a man at middle age, who is crippled by serious bodily infirmities, owes his condition to an old-time gonorrhea, for we have in stricture, the commonest sequel of the disease, something that is capable of producing the most profound pathological disturbances in the proximal portion of the genito-urinary tract.

Few, if any, cases of posterior gonorrhea that are not the cause of an attack of epididymitis, which, aside from its painful condition at the time is not followed by sterility of the patient ; or, what is still worse, to end in abscess or gangrene, and total loss of the testicles, prostatitis, cystitis, calculous disease, dilatation and inflammation of the ureters, surgical diseases of the kidneys, and possibly by its producing a locus

minoris resistentae in the direction of the kidneys favors acute or chronic Bright's Disease from trivial causes, and arthritis, perineuritis, endocarditis, peritonitis, abscess, pneumonia, and last and most common, rheumatism, are among the many possible complications that may affect either sex as the result of this form of infection. While, in the female, who suffers by far the most in this affection, we find a large per cent. of diseased tubes, uterus and ovaries that can be traced directly to a gonorrheal infection, so great has been the per cent. that many surgeons place it at the head of the list of causes of female disorders, and my own experience has been that the more carefully we study pelvic disease in women, the narrower their etiological field becomes, and the more often are they found to be due to gonorrheal infection.

When pelvic inflammations are freed from pathological and anatomical error, they are found most often to be due to tubal troubles, and tubal diseases are unquestionably due almost always to gonorrhea. The simplest trouble that the unfortunate female can have after being once infected by this awful disease is sterility, which has been shown to be almost a universal legacy. In this class of female victims, while the most severe, the most important to her from a patient standpoint, and the most important to us from the standpoint of a surgeon, are the infections of the uterus and its appendages, and it is here that the infection usually shows itself in the most violent form, for it is a well known fact, clinically, that gonorrhea does not present physical conditions analagous to those observed in the male; that vaginitis is exceptional; that urethritis, the only real analogue, is not common, but that the disease shows a special predelection for the cervix, then the uterus, and the next in order being the fallopian tubes. With these facts before us, it is easy to see how many women escape the common affection, such as inflammation of the Bartholin glands, urethritis, cystitis, etc. And it explains the reasons why so many have diseases of these organs and (fortunately for the husband) never knows it unless the doctor should perchance let fall a word that causes them to find out the real cause of their trouble.

Its selection of structures so high up, even though we recognize it as not being a simple leucorrhea, makes it difficult for the gynecologist to relieve, for it travels by continuity and contiguity of structure into the uterus and out into the tubes giving us ovaritis, salpingitis, tubo-ovarian abscess, pelvic or general peritonitis to deal with, or if nature comes to the rescue and encapsulates the poison and holds it in abeyance

for the time being and thereby saves a woman's life, that should she become pregnant at or near the time of infection, that in and during the parturient stage doorways of infection will be opened up, and the infection will be carried by the blood or lymph stream through the system, and the patient loses her life in the most rapid form of sepsis ; or if she escapes by the infection being in the structures lower down, we have the child suffering with a purulent conjunctivitis, which, until it was robbed of its horrors by the triumphs of modern medicine, was the *beta noir* of every obstetrician all over this broad land, but with our present knowledge of ophthalmia-neonaterium we are able to answer in part the question we as physicians and surgeons are often asked, viz. : " Why are not preventible diseases prevented ? " and say to them that we do prevent many thousand cases of blindness each year by the precautions that every man should know and take when he takes such cases in his hands. The above ill-tabulated facts are only a few that may result from infection by this disease, and while I do not wish to be understood as trying to assign every complaint that we are heir to to gonorrhea, I do say that even a casual survey of the morbid possibilities of urethritis will convince any one that it is a formidable disease and far more dangerous than syphilis, and were we to subtract the evil effects of gonorrhea from human ills, the resulting increase in human longevity and happiness would be surprising.

If I have said too much or too little, that will be corrected by those who come after me, but the point I wish to impress on your minds as paramount above all else is : " Is there ever a time after a patient has been infected that we can say conscientiously that he is cured and give our professional consent for him to marry ? " Or to bring the matter a little nearer home, " Is there ever a time when we would be willing to see him marry our sister or daughter ? " I believe there is. I am not so gloomy as the immortal Noeggerath, but I think we owe it to suffering humanity to give the subject more careful consideration than has been done in the past, that when these patients come to the general practitioner, or more often to the specialist in this line, and wish to know whether or not it will be safe for them to marry, that they should be put to the most rigid test with the different methods that are in use by the genito-urinary men, and this test, continued for a sufficient length of time to enable the doctor to arouse the latent gonococci, and then when the microscope has failed to show any, we may be safe in saying that they are permanently cured.

Then, and not until then, will those of us who do surgery cease to see so many and so serious results.

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REPORT OF A CASE OF EPILEPSY.*

BY DOCTOR N. FOURNIER.

Physician to the Dispensary of the Hospital Notre-Dame, Montreal.

Mr. X., age twenty-eight years. On the 6th of November last he fell from an attack of epilepsy for the second time in three weeks. At this time he had two attacks at intervals of half an hour. Until three weeks ago he had never had one. These attacks resemble very much those of real epilepsy—initial cry, falling to the ground, palor of the face, tonic and clonic convulsions, biting the tongue, coma, and the gradually but slowly recovering consciousness. I put the patient to sleep with two grains of hydrate of chloral and three grammes of bromide of potash, administered from hour to hour until the effect was produced.

I saw him the next morning—first, to inquire about his condition; then to establish a treatment *ad causam* if possible.

Subjective references: excellent hereditary antecedents.

He had been in good health until about two months ago, when he began to suffer from a frontal cephalgia, more acute by day than by night.

This cephalgia is more accentuated in the past three weeks, but does not prevent him attending to his ordinary occupations. He is not a drunkard, but from time to time worships Bacchus and also Venus; although the latter has, he states, never given him a sore, throat lesions, cutaneous eruption or baldness; therefore there is nothing in his history that I can find that proves that he ever contracted a primary syphilitic lesion.

*La Revue Médicale du Canada, January 6, 1904.

From an inspection there was nothing remarkable except a small cutaneous cicatrix adherent along the borders of the nose; in the mouth was found a small perforation located in the middle of the palate near the nasal cavity. These scars have existed from two to four years; therefore there is no doubt that the patient is a syphilitic of the most pronounced type; the sores that appeared on the nose and in the mouth are probably of syphilitic origin (gummata), and to-day the appearance of these attacks of epilepsy for the first time at the age of twenty-eight are nothing more than the manifestations of cerebral syphilis. Let us try the touchstone and we shall see; the bromide of potash and chloral will be suspended; the mixed antisyphilitic treatment will be instituted in intense doses; two doses of potash of three to six grammes per day, daily soluble mercurial injections for eight days. Forty-eight hours after beginning this treatment the cephalgia disappeared for good, and now one and a half months have elapsed and no sign of an attack has appeared, and I am confident that the patient will so continue if he will persist with the treatment for a reasonable time.

In conclusion the following conditions impress me as important:

1. Never confide too much in the history given by the patient in making a diagnosis, but search with great care for objective signs.
2. When a patient has epileptic attacks don't forget the words of my illustrious homonym, Dr. Fournier of Paris: "When an adult over thirty years of age has for the first time an epileptic seizure, and while he apparently enjoys good health, there are eight or nine chances out of ten that the epilepsy is of syphilitic origin."

MONTREAL, CANADA.

Progress of Medical and Surgical Science.

Inevitable Abortion in Its Relation to Uterine Diseases.—Dr. George Gray Ward, Jr., of the New York Post-Graduate Medical School and Hospital, states in the March number of the *Post-Graduate Medical Journal* that inevitable abortion should be so dealt with as to avoid the many pathologic conditions that follow.

Of all the sources of uterine diseases none take precedence of mismanaged abortion. Many authors are quoted as stating that subinvolution of the uterus, the result of post-abortive infection, may be regarded as the most prolific source of pelvic diseases in the female, and one of the most frequent causes of uterine disease in after life.

A study of the mechanism of abortion proves that it is rare for the entire ovum to pass out of the uterus with the decidua intact: the curette will almost always bring away pieces of adherent decidua in cases of apparently complete abortion. Statistics have proven that incomplete abortion is the rule, complete the exception, and as incomplete abortion with its sequella is the foremost factor in the cause of subinvolution of the uterus and the ligamentous support, we should employ such means as will insure a complete emptying of the uterus. Dr. Ward claims that if an obstetrician is prepared to apply forceps, rotate or do version, he is prepared to surgically curette the uterus, and that there is not as much liability to infection by curetting as in applying forceps or doing a version, and that the uterus is more susceptible to infection at term than in an abortion prior to term, when we can all introduce our hands to get rid of a retained or adherent placenta, and we are all well aware of the serious consequences that follow retained placenta at term, and that just as serious accidents follow an incomplete abortion.

Dr. Ward advocates, as soon as the diagnosis of abortion has been made, to administer an anesthetic, cleanse the vulva and external genitals, and complete the abortion with the curette. We are not justified in expectant waiting, because fatal septicemia may be developing without sufficient symptoms of its presence until too late—an instance of Tarnier's, referred to by Dr. Hirst, in which the patient did well until the sixth day, and died on the tenth. On the fifth day

her physician detected an odor in the lochia; autopsy showed the uterine tissue softened and the cavity filled with the putrified and still adherent placenta. A man who would tampon and wait for an adherent placenta eight or ten hours after a full term labor, and who would persist in this treatment until evidences of putrefaction greeted his nose before he felt justified in curetting the uterus, would be considered incompetent, to say the least.

It is a well known fact that the patient will more readily consent to an operation and the taking of an anesthetic when she is suffering from the miscarriage, thinking then that the anesthetic is a part of the work necessary in the treatment of a miscarriage, but allow five or six days to elapse and then advise an anesthetic, and the patient has all of the horror of an operation.

Such men as Lusk, Wenckel, Tarnier, Playfair, Zweifel, Etheridge and others oppose Dr. Ward in this radical treatment, and advocate the expectant or so-called conservative plan, and leave it to nature to complete the abortion, controlling hemorrhage by tamponing, and trying to keep down infection by using antiseptic douches.

Dr. Ward advocates a complete abortion with the curette or finger, claims there is less danger of infection, hemorrhage is permanently controlled, your patient and you can rest free from the anxiety of the many sequela should the retained placenta, blood clots, or secundines (a pabulum for bacteria) become infected.

Dr. Ward believes abortion to be a surgical emergency, and that it should be treated on the same sound principles that we treat hemorrhage and the prevention of infection elsewhere, especially in relation to uterine diseases.

Dr. Ward's technique: Place the patient in the Sim's position and tampon the uterine cervix while making the necessary preparations for an operation; this dilates the cervix and controls hemorrhage at the same time. Now shave the vulva and thoroughly cleanse the vagina and external genitals with soap and water, and wash with:

Rx Acetic acid,	2 oz.;
Chloride of lime,	1 oz.;
Water,	1 qt.

Place patient in dorsal decubitus.

Depress the floor of the vagina with a speculum; pull down the cervix with a volsella, and if possible introduce the finger for diagnostic purposes; now thoroughly curette the cavity of the uterus, using a large, sharp curette, pressing only in the downward direction, or be

careful not to puncture the uterus, irrigate and tampon with iodiform gauze; remove gauze on the third day and irrigate.

A pill is recommended to stimulate involution:

℞ Ergotin, gr. 2;
Quin. sulph., gr. 1;
Strychnia, gr. $\frac{30}{100}$.

Take one three times a day.

Diet in Diabetes.—One of the most difficult problems that the physician has to deal with is the diet in diabetic patients, and the present tendency with clinicians is to be far more liberal in their selection of the patient's diet, since the demonstration of the worthlessness of the Gluten food stuffs. It will be of interest to those who deal with this class of cases that in the substitution of potatoes as food for the diabetic much has been added to his pleasure of living. The following extract from the *Medical Record*, April 2, 1904, will be of special interest to the physician, and mark a step in the advancement in the management of the diet for these cases:

Sir James Sawyer, of Birmingham, in the *British Medical Journal*, March 5, points out that until the researches of Mosse two years ago, it was the therapeutic rule to withhold potatoes in saccharine diabetes. Mosse's researches led him to conclude that potatoes, far from being harmful, form a useful and beneficial food in glycosuria, and that they are capable of being substituted for ordinary wheaten bread in daily proportions sufficient to maintain the alimentary ratio—that is to say, in the proportion of two and one-half to three of potatoes for one of bread. Mosse found that a daily ingestion of potatoes in quantities of from 1000 to 1500 grams caused, roughly, from two pounds to three pounds avoirdupois diminution of the glycosuria, quick relief of thirst, and general improvement in the patient. The reason for this beneficial action of potatoes in the feeding of diabetic persons is, according to Mosse, because the salts contained in potatoes are chiefly those of potash, and potash exerts a retarding influence on the progress of diabetes.

Sir James Sawyer states that his own experience in practice during the past two years is confirmatory of Mosse's conclusions, and he goes on to declare that in his opinion the beneficial results of Mosse's discovery and teaching as to the use of potatoes as a food in diabetes might well be carried much further in the dietetics of diabetes than in merely the free allowance of properly cooked potatoes in a dietary.

The writer proposes that the therapeutic difficulty as to the prohibition of ordinary bread for a diabetic may be met advantageously by making bread, cakes and biscuits for diabetics by using the "flour" of properly cooked potatoes instead of the flour of grain. Sawyer's dietary for diabetics is as follows: May eat butcher's meat of all kinds, excepting liver, pork, ham, bacon, poultry, game, potatoes steamed in their "skins." Fish, oysters, crabs, lobsters, animal soups, not thickened excepting by potatoes, mutton broth, beef tea. Bran and potato bread or biscuits, potato cakes, eggs, cream, butter, cheese, greens, watercress, mustard and cress, lettuce, mushrooms, nuts, jelly or custard, unsweetened.

May not eat any bread or biscuits but those made of bran and potato, sugar, asparagus, broccoli, cauliflower, carrots, parsnips, French beans, peas, turnips, arrow root, macaroni, rice, sago, tapioca, vermicelli, pastry, excepting potato cakes, puddings, fruit, fresh and preserved.

May drink water, tea, coffee, soda water, claret, hock, spirits and water, unsweetened; bitter ale, very sparingly; milk, very sparingly.

May not drink cocoa, chocolate, champagne, porter, stout, home-made wines, liquors, cider, sweet wines and ale.

At one time the diabetic was greatly restricted in diet, but owing to the new views, promulgated first by Mosse, the sufferer from the disease has a wide choice of food, and need no longer live a life of rigid self-denial. This more generous regime of living is to his physical advantage.

The Effect of Glycogen on Typhoid Cases.—By F. S. Mason, M. P. S. (Great Britain).—During the recent epidemic at Butler, Pa., ample opportunity was afforded to test the claims made for glycogen, advanced by Dr. Jaques de Nittis, of Paris, viz.: that it stimulates an increase of young leucocytes, and thus by phagocytosis assists the patient in the struggle with the disease.

Claude Bernard was one of the first to investigate and show the important role of glycogen, which exists in the liver of animals and in some low forms of plant life—mushrooms, etc.

Many observers had already remarked that glycogen ceases to be secreted whenever the normal conditions are impaired, which is in some obscure way connected with diminished phagocytosis.

Some 500 glycogen injections were administered hypodermically, and thousands of capsules by the mouth, to typhoid patients at Butler,

during January, 1904, and from the clinical evidence collected by Dr. A. W. Hitt, who was delegated to study the effects of glycogen on the course of typhoid, it is impossible to deny, even if difficult to explain, the very low mortality among the cases treated. Doses as low as one grain, two or three times per day, very materially influenced the heart's action by increasing its fullness and steadiness, and reduced the temperature gradually to the normal.

The hospital charts collected by Dr. Hitt show that with some of the Butler cases there was long continued persistence of subnormal temperature. When glycogen was administered these cases promptly rose to normal, while the high temperatures (104 to 105°) were reduced. In the latter cases the injections were found preferable to the administration of glycogen by the mouth. The injections of glycogen are painless, and produce no sores nor any untoward after effects. All patients were benefited by the treatment, while the length of the convalescence was much shortened.

Opium in Nephritis.—In *The Therapeutic Gazette*, March 15, 1904, Dr. James Tyson supplements a previous article by Dr. Barton Hirst on puerperal eclampsia by saying it is the chronically inflamed kidney that opium is injurious to, and will often precipitate an attack of uremia, but in acute nephritis of the glomerular type that the secretive function is not impaired, if anything hyperactive, and it is on these cases that morphine can be used with advantage. By experiment he demonstrates that in chronic nephritis that the kidney eliminates very poorly—inject into the buttocks of a healthy individual methylene blue, and in from thirty to forty minutes the urine will be colored; whereas, if patient has chronic interstitial nephritis, four or five hours will elapse before the urine is colored, and then only in a slight degree. He relates a case where 5i of paregoric produced a toxic effect in the chronic form.

As to hypodermoclysis, he says that the intravascular tension should be lessened by depletion, diaphoresis or vivisection, and then saline transfusion; otherwise, we are liable to have an engorged and dilated heart, with evil sequela.

THE AMERICAN PRACTITIONER AND NEWS.

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Editorial.

Of all the newer remedies that have been brought prominently before the profession within the last few years, none has attracted more attention, and deservedly so, than the extractions of the suparenal gland, of which adrenalin is regarded to be the active principle.

Attention was first called to them as a hemostatic in the eye and in the nasal cavities, a field in which they have almost entirely done away with the administration of general anesthetics for operations in it, for with the combinations of cocaine and adrenalin the operator could do not only a painless operation, but at the same time a bloodless one, and could have the co-operation of his patient to aid him in doing the delicate work. Not only is it desirable here as a local hemostatic, but equally so to the surgeon who wishes to do a minor operation without the use of general anesthetic, for by the use of the cocaine and adrenalin, as above, he gets a field that is anesthetized, and at the same time is rendered well nigh bloodless, so that he can do the minutest dissection for the removal of a cyst wall or other careful work without

being handicapped by blood constant coming in the field of operation.

This in operative work alone would make it one of the surgeon's greatest friends, but it has a place in the treatment of shock (which is the dread of every surgeon) that perhaps no other drug in the materia medica can fill. Since the experimental work of Crile along this line we have learned that in our old friend strychnia that we had so long relied on in these conditions was of little or no value, and was productive of harm if used in these cases as it had been used, and that in the place of this dangerous remedy that we had in adrenalin, in combination with saline solution a remedy that we could depend on to do some good, it only requiring to be used in 1-25,000 solution, and used by any of the simple methods that we would the ordinary salt solution, getting the effect of the adrenalin to increase the blood pressure and the saline solution to supply the loss of fluid, if the shock was due to hemorrhage.

To the practitioner it is the best remedy that he has at his command for the treatment of hemorrhage from whatever cause it may be due to, whether the bleeding be from the lungs, or from the bowels in typhoid, he will find that after a few doses of the drug that he is gratified by seeing the hemorrhage cease.

Health Report.

LOUISVILLE HEALTH REPORT.

Cases and deaths reported to the Health Department during the past two weeks (March 22 to April 5) :

Scarlet fever.....	6	0
Diphtheria	10	0
Whooping cough.....	0	0
Typhoid	8	3
Tuberculosis.....	3	18
Small-pox.....	3	0

Total births and deaths for two weeks ending March 31 :

Births.....	141
Deaths.....	200

M. K. ALLEN, M.D., *Health Officer.*

Book Reviews.

SIMON'S CLINICAL DIAGNOSIS.—A Manual of Diagnosis by Microscopic and Chemical Methods. For Students and Practitioners. By Charles E. Simon, M.D. Late Assistant Resident Physician at Johns-Hopkins Hospital, Baltimore. New (fifth) edition, thoroughly revised and much enlarged. Octavo, 695 pages, 150 engravings, 22 colored plates. Cloth, \$4.00 net. Philadelphia and New York: Lea Bros. & Co., Publishers, 1904.

SIMON'S CLINICAL DIAGNOSIS.—Were "Simon's Clinical Diagnosis" to undergo retrogressive changes in regard to its value and completeness, it would take quite a while for the Profession to become convinced of this backward condition, so well established is this excellent book on clinical laboratory work. But we are very pleasantly surprised at the advent of one of the few most complete works published to-day.

As to the book, it has been carefully, but amply enlarged, the chapter on blood being enlarged by sixty pages. One of the most valuable additions is the chapter dealing with the nature of the anilin dyes, and the behavior of the various tissues toward them. Dr. Simon is such a persistent and careful worker in the laboratory that although he has dealt with and faithfully tried all stains and methods, and mentions fully each, you may be safe in trying the method or stain that he says has been employed to advantage. The book is, therefore, invaluable for a practical, working text-book on this important branch that has already been included in the curriculum of most of our colleges. Each and every chapter has been either rewritten or revised in adaptation to the present status of our knowledge in pathology.

The plates on the blood are excellent, for they show the condition exemplified. We regard it as in a class with few, and one of the most modern and practical books ever published.

THE PERPETUAL VISITING AND POCKET REFERENCE BOOK.—Including Information in Emergencies from Standard Authors, also the following comprehensive contents: Table of Signs and How to Keep Visiting Accounts, Obstetrical Memoranda, Clinical Emergencies, Poisons and Antidotes, Dose Table, Blank Leaves for Weekly Visiting List, Memorandum, Nurses Addresses, Clinical Record, Obstetrical Record, Birth Record, Death Record, Vaccination Record, Bills Ren-

dered, Cash Received, Articles Loaned, Money Loaned, Miscellaneous, Calendars for 1904 and 1905. Bound in Morocco, Red edges. Pages 124. Price *Free*. The Dios Chemical Company, 2940 Locust street, St. Louis, Mo., 1904.

The above can be truly called a *multum in parvo*, and for a visiting list is one of the most useful, containing one of the best dose tables ever published, and it is teeming with matter of ready use to the practitioner. Adequate space is allotted for the many records that a physician jots down now and then, and the same can easily be referred to at any time. This visiting list can be secured by sending only ten cents in stamps to cover postage to the Dios Chemical Company, who so kindly place this at the disposal of any physician.

We are in receipt of the New York Pharmacal Association's valuable specific for that morbid condition known as "the blues," and goes under the name of "Facetiæ Medicorum." It is one of the few remedies that are not set aside on a shelf with other samples; but, strange to say, most physicians, as soon as in receipt of this valuable product, immediately try it on themselves. Its action is speedy, sure, safe, reliable, non-toxic, non-irritating and all that sort of thing, but may be summed up in the brief following resume:

A crabid old doctor of Gorham,
Was reading "Facetiæ Medicorum."
His sides they shook so,
That his pants stood no show,
And he had to go change, 'cause he tore 'um.

BOOKS RECEIVED.

IMMUNE SERA; HEMOLYSINS, CYTOTOXINS AND PRECIPITINS.—By Prof. A. Wassermann, M.D., University of Berlin. Authorized Translation by Charles Bolduan, M.D. First edition, first thousand. New York: John Wiley & Sons; London: Chapman & Hall, Ltd., 1904.

MANUAL OF CLINICAL MICROSCOPY AND CHEMISTRY.—Prepared for the Use of Students and Practitioners of Medicine. By Dr. Hermann Lenhartz, Professor of Medicine and Director of Hospital at Hamburg, etc. Authorized Translation from the Fourth and Last German Edition, with Notes and Additions, by Henry T. Brooks, M.D., Professor of Histology and Pathology at the New York Post-Graduate

Medical School and Hospital; Member of the New York Academy of Medicine, etc. With 148 Illustrations in the Text and 9 Colored Plates xxxii-412, Octavo. Bound in Extra Cloth. Price, \$3.00 net. Philadelphia, Pa.: F. A. Davis Company, Publishers, 1914-16 Cherry street.

PROGRESSIVE MEDICINE, Vol. VI., No. 1, March 1, 1904.—Edited by H. A. Hare, M.D. Philadelphia and New York: Lea Bros. & Co.

THE GREAT VALUE OF DRAINAGE AND ICE IN THE EARLY STAGES OF MASTOIDITIS.—A reprint from the *Journal of American Medical Association*, January 2, 1904. By Sargent F. Snow, M.D., Syracuse, N. Y.

PROGRESSIVE MEDICINE, Vol. I, March, 1904.—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 337 pages, 7 illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Philadelphia and New York: Lea Bros. & Co., publishers.

EXERCISE AS A MODE OF TREATING DISEASES OF THE HEART.—By N. S. Davis, Jr., M.D., Professor of Principles and Practice of Medicine and Clinical Medicine in Northwestern University, Chicago. A reprint.

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Regular monthly meeting, Tuesday, March 22, 1904, with the President, Dr. J. W. Irwin, in the chair.

CLINICAL PATIENTS—OSTEO-MYELITIS.

Dr. Willmoth: This boy is seventeen years old, and received an injury to his hand about four weeks ago. He was employed in a shoe store, and a box slipped and fell on his hand. There was little pain, and it did not swell, and he worked for nearly a week, when the pain increased and swelling began. He presented himself at the Kentucky School of Medicine, and Dr. John R. Wathen put the hand in a splint, and made an X-ray of it, but failed to find any fracture. The case was sent back to the surgical clinic, and was kept in splint, with applications of lotions, hot water, etc., but went from bad to worse. Last Thursday Dr. Samuel introduced an aspirator needle, and found that the carpal bones were all denuded of the periosteum, but failed to find any pus. An incision was made over the back of the hand, which gave him some relief. His hand is now as bad as before. We did not have his permission at the time to remove any of the bones. He has very little temperature. Family history good.

Dr. F. W. Samuel: As to the pathology of the case, I believe it is one of osteo-myelitis of the carpal bones. This diagnosis was made by me at my clinic. We all know that injuries of this character are predisposing factors in tuberculosis. This inflammation was not very acute and came on slowly, which inclines me to the belief that it is tubercular osteo-myelitis. After the incision was made we found the bones perfectly denuded of periosteum.

Dr. Ewing Marshall: I would advise in cases of this kind a free incision, with continuous application of hot water for several days.

RELAPSE IN PNEUMONIA.

Dr. Ewing Marshall: Pneumonia is one of the most widespread of acute diseases, and any communication to a medical society upon it should be of interest. Flint says: "When convalescence takes place in this disease it generally progresses until the recovery is complete. The tendency to pass into a chronic form is exceedingly slight, nor is there a tendency to relapse." Page 188.

Osler says, page 325: "The creeping or migratory pneumonia

successively involves one lobe after the other, and is a peculiar and well recognized variety."

Osler says, page 524: "Relapse in pneumonia is so uncommon that some good observers have doubted its occurrence. I have never seen an instance in which I was certain that there was a definite relapse. There are cases in which from the ninth to the eleventh day the fever subsides, and after the temperature has been normal for a day or two, a rise occurs, and fever may persist for another ten days or two weeks. Though this might be termed a relapse, it is more correct to regard it as an anomalous course of delayed resolution. When it does occur, the attack is usually abortive and mild."

Wagner (quoted by Osler, page 524), who has studied eleven hundred cases, says he met with only three doubtful cases.

The case of pneumonia that I wish to report has the especial interest that it seems to be quite rare, if not almost unique.

The patient, a young man of nineteen, in robust health prior to this time, was attacked by the prevalent influenza.

In the early morning of the 16th of February, 1904, he had a severe chill, accompanied by intense nipple pain in the right side. The lower lobe of the right lung was involved. At the end of the fourth day or the beginning of the fifth he had crisis, the pneumonia process apparently not having involved the whole of the lower lobe. This occurred on the morning of February 20th.

Temperature soon became subnormal. Pulse, which had never been above 100, dropped to 64 or 68. Respiration, which had been 42 for a short time, dropped to 20. He apparently was going through an early and good convalescence. Everything was so favorable that records were discontinued at noon on the 24th. At that time temperature 97.4°, pulse 58, respiration 24.

He had a good night, and awoke on the 25th feeling splendidly. He was kept in bed, but was allowed to sit up considerably with pillows behind him. The only thing imprudent that I know he did was possibly sitting up in bed too long and playing checkers. That night, February 25th, without consulting me, they gave him an elaborate supper, with fish and chocolate as part of it. This, or something else, upset his stomach. During the evening he had a chill, and before the morning of the 26th arrived his temperature was 104°.

He went through a second typical pneumonia. Dr. Carl Weidner saw him twice with me on Sunday, February 28th, and once on

Monday, February 29th. There was a suspicious point at the upper part of the lower right lobe at this time, and we considered the possibility of an abscess. Also tuberculosis and gangrene were thought of, as the sputa on the one hand was peculiarly thin, and also on the other hand the sputa had such a fetid odor.

Crisis came in the early morning of March 3d, probably the beginning of the seventh day of the second pneumonia.

The old teaching was crisis comes on the fifth, seventh, ninth or eleventh. Sometimes we see it even as early as the third day. In my opinion, the new pneumonitis in the second attack began in the top of the lowest lobe of the right lung at the point where the first trouble subsided, and the second inflammation involved the whole right lung, but never invaded the left. The temperature ran higher in the second attack, reaching 105°.

Dr. Carl Weidner: I have never before seen a case of this kind. I agree with Dr. Marshall that this is a unique case of a second attack of pneumonia. There is nothing unusual in having pneumonia recur in the same lung at long intervals. I remember one child that had it three successive years in the same lobe. I saw this patient, and made a careful examination, and noticed bronchial breathing and dullness below, and tympany over a small area of the lower lobe. There was a sudden rise of temperature. The sputum was thin, slightly bloody and somewhat fetid, which made me think of possible abscess formation. Typhoid fever could be excluded, as the patient's mental condition was clear; meningitis could also be excluded. The question of tuberculosis was considered and the sputum examined, with negative results. The next day the signs all pointed clearly to pneumonia. The patient is to be congratulated on making a recovery, for a lung just barely recovering must be in a dangerous condition for a second attack.

I think, possibly, the explanation lies in his having had influenza previously. I have seen several cases where there was a migration from one lobe to another, and at post-mortems I have found one lobe in extreme yellow hepatization, with the other just beginning.

Dr. J. A. Flexner: I take it that the first pneumonia was a croupous pneumonia. The second process seems to be different. Might it not be a diplococcus pneumonia? I do not think both were of the same bacillary origin?

Dr. E. S. Allen: The reason why we do not have second attacks of pneumonia recurring is because of the immunity established by the

because of the relation of ulceration of the stomach to cancer, and while Dr. Mayo has found 60 per cent., when we go further into the subject, remembering that 40 per cent. of all carcinomatous conditions are found in the stomach, we will learn that it is the exception to have carcinoma, particularly at the pyloric extremity, except as a complication subsequent to gastric ulcer, the cancer developing in the base of the ulcer or around the epithelial structures in the scar tissue.

Dr. Irwin has spoken of the difficulty in diagnosis, but when we go back twenty-five years and see Lawson Tait accused by the best men in Europe and this country of "false" statements about pus tubes, etc., saying that they grew only in Birmingham, and they never had any in their practice, we will have learned a wise lesson in matters of this kind. While men did not know anything about the diagnosis of pus tubes then, a tyro in medicine can to-day make a correct diagnosis.

We can look back to the time when there was no clear idea about appendicitis and no operation for it, but to-day it is understood pretty well by even the average physician in the country, and the indications for treatment are so well understood that the question is almost settled. When we come to gall stones, to cholecystitis, and obstruction in the bile ducts, we remember that only a few years ago gall stones were pathological curiosities, while to-day they are understood in their formation, in their results, in their symptoms, in diagnosis and in treatment, practically as well as diseases of the appendix.

The stomach is the last of the organs we have reached, and it is strange that we should not know more about it than we do in a surgical sense, because of its ease of manipulation. Fifty years ago the surgeon did not know how to control the blood supply in operations upon the uterus, now—understood by every one. With Billroth, hemorrhage was controlled with difficulty in gastrectomy. To-day, with our knowledge of the blood supply of the stomach, which is similar to that of the uterus, we can do almost a bloodless operation. With our experience in the manipulation of the intestines, we can make a gastro-enterostomy with ease and promptness. It can be done by an experienced surgeon in ten minutes.

We have studied the anatomical relations of the stomach practically, its pathological condition, and the surgical technique in operations, and each year some ingenious surgeon is devising some simpler means for treating these cases, and within a few years gastric diseases will be treated with as much ease as we now remove the uterus. If we can diagnose these cases, observing the physics more than the chemistry, we will have accomplished a great deal.

Society adjourned.

Notice.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended March 31, 1904:

Wasdin, Eugene, Surgeon—Granted leave of absence for one month from April 1, 1904, on account of sickness. March 30, 1904.

Rosenau, M. J., Passed Assistant Surgeon. Detailed to represent Service at meeting of Tuberculosis Committee, College of Physicians, Philadelphia, Pa., March 28. March 26, 1904.

Cumming, H. S., Passed Assistant Surgeon—Granted leave of absence for ten days from April 5. March 25, 1904.

Lavinier, C. H., Passed Assistant Surgeon—Granted leave of absence for two weeks from March 29. March 26, 1904. Granted three days' extension of leave of absence from March 31. March 26, 1904.

Grubbs, S. B., Passed Assistant Surgeon—Granted ten days' extension of leave of absence from March 31. March 28, 1904.

Billings, E. C., Passed Assistant Surgeon—Granted leave of absence for two months and three days from April 30, 1904, with permission to go beyond the sea. March 26, 1904.

Richardson, T. F., Assistant Surgeon—Detailed to attend conference of State Health Officer and County Health Officer of Texas, March 31. March 29, 1904.

Amesse, J. W., Assistant Surgeon—Granted leave of absence for two months and fifteen days from May 1. March 26, 1904.

Bogges, J. S., Assistant Surgeon—Granted leave of absence for two days from March 30. March 29, 1904.

CHANGES FOR THE SEVEN DAYS ENDED APRIL 7, 1904.

Von Ezdorf, R. H., Passed Assistant Surgeon—Detailed as Recorder of Board of Examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as Assistant Surgeon. April 6, 1904.

Foster, M. H., Passed Assistant Surgeon—Bureau letter of March 19th, granting Passed Assistant Surgeon Foster leave of absence for ten days from March 30, arranged so that said leave shall be effective April 29. April 6, 1904.

Anderson, J. F., Passed Assistant Surgeon—Relieved from duty as Recorder of Board of Examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as Assistant Surgeon. April 6, 1904.

McClure, T. B., Assistant Surgeon—Relieved from duty in the Hygienic Laboratory, Washington, D. C., and ordered to proceed to Tampico, Mexico, for duty with the Hon. of the United States Consul. April 2, 1904.

Glover, M. W., Assistant Surgeon—To proceed to Vancouver, B. C., for special temporary duty. April 3, 1904.

Warren, B. S., Assistant Surgeon—Granted leave of absence for six days from April 19. April 5, 1904.

Moncure, J. A., Acting Assistant Surgeon—Department letter granting Acting Assistant Surgeon leave of absence for thirty days from April 1, 1904, arranged so that said leave shall be effective from April 10. March 27, 1904.

BOARD CONVENED.

Board convened to meet at Station, N. Y., April 6, 1904, for the physical examination of officers of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon A. C. Smith, Chairman; Assistant Surgeon T. W. Salmon, Recorder.

early if success is to be hoped for. When the lymphatic system is much invaded it is too late for any operation. I agree with Dr. Flexner that gastric analysis alone is not sufficient. I think deficient motor power is an important point. The diagnosis of ulcer is not always easy, but localized pain, hemorrhage, disturbance of nutrition, hyperchlohydria, are of great aid. Carcinoma is not always preceded by ulcer. There are many cases with history of disturbance of digestion and hard indurated masses form in the region of the pylorus without any signs of previous ulcer.

I presented to the Society a little more than a year ago a patient whose condition I have not reported since. He gave a history of chronic ulcer, with pyloric obstruction. All agreed that it would be better to operate, a suggestion I had made two years previously. He died suddenly two months later, after a lavage of the stomach. During one of his attacks, following a moderate meal, he awoke in the night, washed out his stomach, felt excessive pain, fell down, developed a rigid abdomen, and lived until six in the morning. Examination showed that the pyloric opening was so narrow a pencil could not be pushed through. He also had an ulcer which had perforated in the posterior wall in the central part of the stomach about the size of a quarter, with necrotic areas the size of a half dollar. A pouch had formed back of the stomach, which held about a pint of fluid.

It is dangerous to wash out the stomach or inflate it with air when gastric ulcer is suspected.

Dr. Ewing Marshall: I agree with Dr. Flexner about the test meal, and that early diagnosis is the great desideratum. If we can diagnose it the knife should be used, but if the trouble is malignant, I question the advantage of the knife. The more I read and see of operations for the removal of malignant growths, the less hope I have in them. I believe the growth has extended beyond where the hand can follow or the eye see. If an organ is involved, if we attempt to remove the malignant part, it is better to remove everything. If I had a stomach with malignant growth in it, I would ask for the stomach to be removed.

Dr. J. B. Bullitt: This is coming to be a subject in which the general practitioners feels a special interest. Surgeons, also, who work in other parts of the abdomen feel that they will soon be called upon to attack the stomach, which is always considered apart from the other organs, with a warning hand held up, without any good reason why it should be so. When proper technique is employed, the stomach lends itself very readily to operative interference.

The simplest condition demanding interference is the condition of atonic dilation. This is often treated by the internists with great success, and most of the cases do not require surgical interference. But there are cases where, after the most judicious treatment, the stomach remains permanently dilated. If these stomachs be drained at a low point, the resulting comfort is marvellous. I speak as the result of personal contact with some of the best operators in America. It is in these cases that they recommend the Finney operation especially. It has been found that after anastomosis at the lowest point, drainage will take place so long as this opening remains at a lower level than the pyloric opening. If the pylorus be not obstructed, the artificial opening will gradually close. Finney cuts out the pyloric end of the stomach and obviates the forming of the vicious circle.

Dr. J. W. Irwin: The question of diagnosis is all I care to discuss. It is not always easy to diagnose gastric ulcer, and it may exist for quite awhile before it can be discovered by palpation or percussion. The nutrition may not be affected for a considerable time. I do not see how the surgeon is to arrive at a sufficiently clear diagnosis to operate early enough to prevent carcinoma. In a practice of nearly thirty years I can not recall a single case of gastric ulcer (I never had one to die) that terminated in carcinoma. Some may have passed into other hands. I have seen quite a series of cases of ulcers of the stomach; I have five or six under treatment now, mostly in young people. There is a good deal of induration disturbances of nutrition and so on, but I have little fear of carcinoma developing. If the diagnosis can be made sufficiently clear, operation may be done as a preventive measure, but I am not convinced that this can be done.

Dr. W. H. Wathen (closing): If my paper will impress the Fellows of the Clinical Society with the importance of watching carefully into the history of all chronic troubles of digestion, so that we may approximately arrive at a correct diagnosis of organic lesions before the condition has progressed too far, and institute surgical interference to relieve the disease primarily or prevent the development of a carcinoma, then I shall have done more than I expected to do, because just here is the important question which stands out conspicuously before the profession, and which will be a live subject until the discussion of gastric diseases in relation to surgery has been settled. Dr. Mayo, in examining these cases by his trained assistants, has found that in 145 cases of cancer that came to operation, 66 per cent. had previously had ulcers. Hence, you see the magnitude of this subject

bacteria. But the antitoxin of one infection would not be antitoxic to an infection of another kind. I would like to inquire about Dr. Marshall's treatment. I have just had a case die with the crisis on the fourth day. I considered his general condition good, but he died very rapidly. I noticed that the heart beat for three minutes after respiration ceased.

Dr. W. F. Boggess: I think Dr. Flexner's suggestion the most plausible one. On the chart you will see that the respiration and temperature did not run a typical course with the second attack. This is undoubtedly a winter in which we have been meeting the unusual. I have seen several cases of migratory pneumonia. I saw one boy with a double pneumonia, and two days afterward his temperature and pulse were normal. The next day he had a chill and another infection in the opposite lower lobe. I think both of these were grippal pneumonia.

I saw one case the other day where the temperature dropped to normal and the other lobe became infected. Dr. Allen will remember a lady shown the class with one lung in consolidation and the other well advanced in resolution. That was a typical migratory infection. Clinically, we have all seen the so-called "pseudo-crises," but I would say that in Dr. Marshall's case there were two different conditions of different bacillary origin and different pathological conditions.

Dr. Marshall (closing): Replying to Dr. Allen's question, I have no secrets in my treatment of pneumonia. I think one of the great things is not to overstimulate.

UPWARD CURVATURE OF THE PENIS.

Dr. T. P. Satterwhite: A gentleman consulted me recently with a very singular affection. He is middle-aged unusually passionate, with good capabilities. He says he never had any venereal disease in his life. He says that he has noticed that when his organ is erect it had been curling up for the last twenty-six months, and he was afraid this might continue so that he would be incapacitated. I had never heard of any trouble of this kind, but on looking the matter up, I found there is a disease of the penis that causes just such a curvature, and will in course of time incapacitate a man for intercourse. I want to get advice as to treatment and prognosis. The books say it is an affection of the corpus cavernosum, that it is progressively, but slowly. It is considered a subacute inflammatory trouble.

Dr. Carl Weidner: I have known them to curl downward. There must have been some inflammatory condition leading to a cicatrization.

I think the best thing would be to put it in splints.

Dr. J. B. Bullitt: It has been suggested that this penis be put in splints, but the kind of splint, external or internal, has not been specified. An external splint would not be feasible. I recall a case of a similar character which Dr. Bloom exhibited before the Surgical Society, where the individual had taken the bone handle of a tooth brush and whittled it down and smoothed it off so it would enter the urethra, thus applying his splint internally. He failed to take proper precautions, however, and one time it slipped back into the bladder. I would, therefore, suggest an internal splint with a string tied to it!

PLEURO-PNEUMONIA.

Dr. T. P. Satterwhite: Last Thursday I aspirated a case, and drew off over a quart of pus from the right side of the chest. I then sent the man to the hospital to prepare him for reopening it. To-day I used ethyl-chloride, and entered the chest and found a cavity. I did not know whether I was in the right place, and put my finger in and wind came out the opening. I thought it would be my duty to aspirate where I had before, and this opening will remain patulous for some time. The man is evidently septic, with a temperature above 100° and pulse 100. It is a puzzle to me why I could not find a drop of pus.

Essay by Dr. W. H. Wathen, "Surgery of the Stomach," under original articles in this issue.

Dr. J. A. Flexner: I have thought for some time the burden of this matter rested upon the general practitioner. The relation between gastric ulcer and carcinoma is no longer a question. A great mistake is made in depending too much upon gastric analysis, for it is more true of the stomach than any other organ that the secretions of one day differ from those of another day. The amount of gastric juice and its character are dependent upon many things other than the test-breakfast. We have no right to believe that a series of examination by any test-breakfast will give a correct explanation of the processes taking place in the digestive tract. When patients show loss of weight, retention of the gastric contents and obstruction, we ought to turn them over to the surgeon before they are cadavers. This is my opinion as a general practitioner.

Dr. Carl Weidner: I suppose eventually we will be removing the stomach as we do the appendix, uterus and other organs of the body, and the cardiac end of the esophagus will be connected with the duodenum. The diagnosis of cancer of the stomach must be made

Board convened to meet at Washington, D. C., to consider the construction or purchase of boarding steamers for the quarantine stations at San Francisco, Cal.; Port Townsend, Wash.; also to consider type of launch for boarding or inspection of vessels at the Key West Quarantine and at Havana, Cuba; also to consider the feasibility of repairing the launch Spray at the Delaware Breakwater Quarantine, and placing new motive power therein. Detail for the Board: Assistant Surgeon General A. H. Glennan, Chairman; Assistant Surgeon General W. J. Pettus; Assistant Surgeon General H. D. Geddings, Recorder.

Board convened to meet at Baltimore, Md., April 4, 1904, for the physical examination of officers of the Revenue Cutter Service for promotion. Detail for the Board: Surgeon H. R. Carter, Chairman; Assistant Surgeon. C. W. Wille, Recorder.

Board convened to meet at San Francisco, Cal., April 4, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon W. G. Simpson, Chairman; Assistant Surgeon Carl Ramus, Recorder.

Correspondence.

The American Practitioner and News, Louisville, Ky.:

MY DEAR EDITOR—This being the first time that I have had the opportunity of writing to you, perhaps it would be best for me to first state that we have one of the best working and best attended societies in the State.

Taking into consideration our numbers in the county, our attendance is 80 per cent. of the membership enrolled. No society has a better interest nor a more enthusiastic membership. We also have a co-operative membership, one that is interested in one another's welfare as physicians; also harmonious in their views, more or less, one toward another.

The papers that have been read from time to time show an understanding of the fundamental principles of medicine, and would reflect credit on any society in the State.

There is nothing more helpful to the profession than a good working medical society in each county or town of our State; so let us do all we can to more thoroughly organize the profession in Kentucky.

Hoping this will be cheering to the profession wherever read,

I remain yours fraternally,

M. M. MOSS,

Secretary Simpson County Medical Society.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

VOL. XXXVII.

LOUISVILLE, KY., APRIL 15, 1904.

NO. 146.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

TUBERCULAR PERITONITIS.*

BY CARL WEIDNER, M.D.

Standing on the boundary line between internal medicine and surgery, there is hardly any subject that has received more consideration than tuberculosis of the peritoneum. This is due principally to the recommendation of Professor Koenig, in 1884 to treat all cases by laparotomy, and to the favorable reports by surgery since then.

The disease is seldom primary, as in cases in which tubercle bacilli penetrate the mucosa of the intestines and enter the lymphatics without causing an intestinal lesion. Most common is development secondary to tubercular disease of some abdominal or distant organs. Among the more frequent causes are tuberculosis of the mesenteric and retro-peritoneal glands and tuberculous disease of the tubes and ovaries in women, the tonsils and the lymphoid tissues in the naso-pharynx, the bronchial glands, particularly those at the tracheal bifurcation, pulmonary and pleural tuberculosis, tubercular bones and joints, etc. While lymphogenous in the majority of instances, there may be entrance by the blood stream, either by tubercle bacilli breaking into the capillaries, or, as has been suggested, by the formation of endothelial tubercles. One of the most difficult problems is to trace the primary focus of infection. Pathologically, as well as clinically, we may distinguish three forms:

*Read before the Louisville Clinical Society, April 5, 1904.

1. Miliary tuberculosis, usually with a considerable serous exudation, the so-called ascetic form; this may be acute or chronic.
2. The fibrous or fibro-adhesive form.
3. An advanced stage of the latter, accompanied by caseation and ulceration—the ulcerative form.

The *symptoms* of tubercular peritonitis resemble those of the non-tubercular, especially in the acute form. There is great variance in different cases, and diagnosis is often very difficult or impossible. They may be so trivial and indistinct that the disease has not been suspected, and has been accidentally disclosed by a laparotomy for some other condition, or at the post-mortem table. In some the symptoms resemble typhoid fever. The fever, as in all tubercular affections, is, however, more erratic in type. While at one period or another fever is present, there are cases that may show no fever, or even a subnormal temperature. Abdominal discomfort or pain, localized or general, is an early symptom; it may be continuous or intermittent; tenderness is mostly present. Fever rises with pain or with exercise. Tympanitic abdomen, distention, exudation of fluid, either sero-fibrinous or slightly bloody or purulent, occurs in varying degrees. Digestive disturbances, nausea, vomiting, disturbed bowel function, either constipation or diarrhea, the latter often mucoid, or bloody, or fetid, usually occur. I have seen two cases of advanced disease where the patients could not control the movements from the bowels. In consequence there is disturbed nutrition, often dry brown skin, progressive emaciation and anemia and loss of strength. In some cases without exudation we may palpate tender, enlarged mesenteric glands or nodes; in others with moderate exudation we can feel resistance in the abdominal wall and resistant tumor-like masses, especially over the omentum, which is found to be much thickened and rolled up transversely across the abdomen. Irregular areas of dullness, changing with tympany, may be shown by percussion, due to thickening and adhesions or cysts on the one hand and distended intestines on the other. Abscess may form in the peritoneum and may break externally. Chronic abscess, opening at the umbilicus, is very suspicious, especially if there is a bad family history. Dr. G. N. Acker, of Washington, D. C., reports two cases in children six and eight years where abscesses opened at the umbilicus. I believe I have seen one case of this kind in this city, although other colleagues differed with me in the diagnosis. There had been a trauma before the development of the abscess. In young children the onset

is often insidious, emaciation, palor and enlarged glands being the first symptoms noticed.

Differential diagnosis is often difficult. In the latent form, at an early period at least, the disease can hardly be diagnosed. Abdominal symptoms, as pain, tenderness, distention with gas or fluid, disturbed action of bowels, progressive emaciation and anemia and debility, with irregular fever, point most strongly to tubercular disease, especially if there is a suspicious family history, or if there has been good chance for infection by tuberculous milk. A very interesting fact is that in some cases of purely tubercular infection there may be absence of both fever and tenderness. As to the effect by trauma we see very few authentic cases reported.

R. Luecke (*Berl. Min. Woch.*, 18, 1903) reports a case of this kind. A boy twelve years old fell on his back while skating, another boy falling on his abdomen. Serious abdominal symptoms developed rapidly, but the pain left after a short period. There was no tenderness on the second day. On account of the vomiting, rapid pulse and a subnormal temperature, 36.5° C. and 35.2° C., there was strong suspicion of volvulus. Fifteen days after the accident Professor Sonnenberg did a laparotomy, and found a diffuse acute miliary tuberculosis of the peritoneum; death after four hours. Post-mortem examination by Professor Langerhans showed in the main an acute miliary tuberculosis of the peritoneum, a few scattered tubercles in the lower part of the right pleura, enlarged caseous bronchial and mediastinal glands, non-caseous retro-peritoneal glands and swollen pharyngeal follicles and cervical glands. The conclusion was that the caseous mesenteric glands were the source of the peritoneal infection, superinduced by the trauma. The onset, the absence of fever and of pain and tenderness are of especial interest.

Ascitic cases may need differentiation from cirrhosis of the liver. In children that disease is rare. In adults the history, the uniform enlargement of the abdomen below, the history of alcoholism or syphilis, the character of the fluid, disturbed venous circulation, possible bleeding from the stomach or bowels, the absence of pain and tumor-like masses, and an irregular fever will help us. The existence of tubercular disease in other parts of the body, the family history may help us here as well as in the distinction from chronic non-tubercular forms. Eisenelraht directs attention to the point that tumors posterior and lateral to the uterus, with symptoms of slow inflammation, always suggest tuberculosis by the rapid growth of the

effusion. Coincident pleurisy, greater amount of gastro-intestinal disturbances, irregular hardness along the edge of the tumor are distinguished from cysts of the ovary. Bimanual examination through the abdomen and rectum, with the cervix uterus drawn down and held, would distinguish a cystic tumor if connected with the cervix, and an ovarian cyst by its pedicle. Tubercle bacilli may be found in the curetting. Lochlein also advises this bimanual examination, palpating for nodules, and a diagnostic incision into Douglas' *cul de sac*.

Cancer of the peritoneum may produce similar nodules and tumor masses in the omentum, but progresses more rapidly, and the finding of visceral malignant disease will aid in differentiation. Fever, if present, will be in favor of tuberculosis. Cases with slow onset, abdominal tenderness, meteorism and continued low fever resemble very much typhoid fever; the fever is usually more irregular, however, less high, the tongue is clearer and less trembling, and the sensorium clearer in tuberculosis than typhoid. Rose colored spots, Widel's blood test and time may clear up the question.

The tuberculin test or the agglutination test may be of positive service in all doubtful cases, especially in young children, where the diagnosis is very difficult or impossible, because the disease in infants is frequently a "pure" tuberculosis, and may run a course without fever.

Tubercular appendicitis is frequently not diagnosed. The slower course, the fever, absence of tendency to form a larger exudate, tubercular history or tuberculosis in other parts of the body, together with marked constitutional depression, rapid pulse, malnutrition, progressive anemia, irregular fever and time may help us.

The prognosis is grave, but not hopeless. Improved general medicinal and dietetic hygienic methods and the introduction of laparotomy have made the prognosis much more favorable. There may be 50 per cent. or more of cures. Prognosis is best in the ascitic form, less in the adhesive, and bad in the ulcerative form.

The treatment may be classified as expectant medical and surgical. Here, as in many other cases, a rational combination may be of much benefit.

Since we all must admit that there does occur a spontaneous cure of tuberculosis, and since the results in the management of tuberculosis elsewhere have improved in later years by a better understanding of the pathology and by improved general management, we are justified and encouraged to try general treatment in this disease also. If the

process is localized we may be hopeful ; if we can give the child or the patient the best general assistance, good hygienic surroundings, treatment, etc. ; if it is general, complicated by various visceral lesions, no treatment will promise anything. Medical treatment ought to be tried in every case for awhile, and if not successful, or if special surgical indications come up, operate.

Among the most important remedial agents to be considered are rest, proper diet, good air and sunlight, climate, general hygiene, etc.

Rest, in all forms of tuberculosis, is one of the best means to prevent or lessen fever and pain, and wasting and debility. Fresh, pure air and as much sunlight as possible ; if necessary to get these, and the patient's means allow it, change of climate is desirable. Careful attention to general hygiene, including hydrotherapy, and attention to the bowels are needed. The diet ought to be general and liberal, with a predominance of proteid food, raw or rare beef, broiled mutton, chicken, plenty of eggs and pure milk from healthy cows. Tonics, including iron, cod liver oil, and later the hypophosphites of sodium and calcium are indicated. As direct remedial agents the preparations of creosote rank first ; pure beechwood creosote, or, better, the carbonates of creosote, or guaiacol, in increasing doses from two to five to twenty-five days, three to four times a day, in egg emulsion, alternating with ichthyol or benzosol, guajalin, euophen, iodoform, etc. The same remedies may be used as enemata with milk or oil, or externally rubbed into the skin in the form of ointments. Sapo viride was recommended as an inunction by Professor Senator nearly twenty years ago. I have for several years been partial to inunctions of euophen or iodoform mixed with sapo viride and vaseline or olive oil, as by the following :

R̄ Euophen. 5ii ;
Saponis virides ;
Vaseline. aa5i.
Half angt.

D. Sig. 5i. rubbed upon the abdomen once a day until absorbed.

It has made the impression upon me that by their use there was improvement as to pain and tenderness, fever, enlargement of the abdomen, and of the general condition of the patient.

Since we must admit a spontaneous cure of tuberculosis, it is not difficult to state how much any form of treatment may have had to do with improvement or a cure, but I believe that by following the general treatment outlined above we may aid nature in bringing about a cure.

in many cases. The results by these measures will in all probability be fully as good as in the cases treated by surgical means. I consider it safe to advise the following indications:

Medical treatment ought to be tried first in every case for several weeks; assist nature to bring about immunity of the body; if unsuccessful, if the fever continues for many weeks, if there is increased emaciation and increased distention of the abdomen instead of a diminution in size, or in any case if there is great distress on account of a large exudation into the peritoneal cavity, then turn the case over to the surgeon.

The operative measures employed are of simple paracentesis and laparotomy. Ever since Koenig advised the latter in 1884, there have been many operations done, with varying results, cures being claimed in from 50 to 80 per cent. Errors in statistics may, however, have easily occurred in two ways—many cases may have been non-tubercular, or relapses may have occurred after reports of the cases. Simple incision, evacuating the exudate, separating eventual adhesive bands, and immediate suturing of the abdominal wound, constitute the most common operation. Some wash out the cavity with salt solution; others do not. Drainage is done in some cases, fecal fistula often following the operation, especially in the fibro-adhesive form of the disease. Radical measures of operation are to be discouraged. So eminent a surgeon as the late C. Fenger, of Chicago, took a very positive stand against radical operations. He not only thinks the difference between laparotomy and paracentesis is more apparent than real, but that the radical operations in tubercular peritonitis, as curetting, excision of tumors of the omentum, breaking up of adhesions and excision of mesenteric glands, has been frightfully disappointing, and teaches us that nature cures tubercular peritonitis better than the surgeon. Quoting the words of Borshgreving, he advises to turn these cases back to the internist, with thanks for the splendid opportunity which a misunderstanding gave to the profession by means of laparotomy to study tuberculosis in one of the large cavities of the body. Fenger, in a careful review of the subject, following up cases operated and not operated, for a number of years, concludes that no good has been done by the operating.

Baylac recommends aspirating, followed by lavage with hot sterile water of 45° C., having five cures out of eight cases.

Bottomly has reported twenty-eight cases operated by incision without washing out. Of these eleven were cured, *i. e.*, were free

from symptoms one year operating, two improved, eleven died in one to four months, four could not be traced.

Ratch, up to 1902, had twenty cases, eighteen operated successfully two to five years after operation.

At the Physicians' Congress at Cassel, in 1903, Thoenes reported eighty cases, and advises to operate in all cases except in florid phthisis.

Sellheim, speaking of tubercular disease of the pelvic organs, reports sixty-five cases of genital tuberculosis observed at the Freiburg clinic within eight years. Twenty-eight were treated palliatively with satisfactory results as to relief of symptoms and arrest of disease. Thirty-seven capital operations were performed with equal success.

Cassel had four cures out of eight cases (cures for two to six years).

Herzberg 60 per cent. out of twenty-nine cases.

Psaltoff cites forty cases, with thirty-three cured and seven deaths.

Hochsinger had three unfavorable results after operation.

Ganghofer, Baginsky, Comby, Senator, and many eminent clinicians advise to try internal treatment in every case before operation. My own experience, extends over an observation of ten cases. Five of these were operated, with three immediate deaths, one after two months, one cure; of the five not operated, one died, and four have become quiescent or cured.

Recognizing that tuberculosis of any organ or tissue of the body is due to an infection by the tubercle bacillus, implanted upon a suitable soil, we ought to use every possible means to *prevent* the disease, first by not exposing the child to the various sources of infection by bacilli; second, by increasing the physiological resistance of the tissues by all rational methods. The whole subject belongs practically to the domain of modern hygiene. This is not the place to discuss this wide subject in detail. There is, however, one question of especial interest as to the etiology of this disease of the peritoneum, *i. e.*: "Is there any danger in drinking fresh milk from tubercular cows, or eating meat of such cattle?" I believe that Robert Koch's views, expressed before the Congress of Tuberculosis, in 1901, which are in effect that milk, butter and meat from tubercular cattle are practically not a source of danger to the human race, are not only far-reaching in their effect, but extremely dangerous teaching. In spite of his great authority there has since accumulated enough evidence against his opinion, both by clinical experience and by experiment, to make us look upon milk and meat of tuberculous cattle as a dangerous source of infection to the human race, and especially to young children. While I do not agree

with the radical view expressed by Dr. Nathan Raw before the British Medical Association in 1903 (see *Medical News*, September 19, 1903) that the bovine and human bacillus are two separate varieties, though morphologically identical. I have been very strongly impressed by his arguments and his post-mortem statistics quoted, which show such a large percentage of tuberculosis of the abdominal organs in young children, most probably due to infection by tuberculous milk by the digestive tract, while in tuberculosis of the lungs, caused most frequently by inhalation of tubercle bacilli, there is a comparatively rare involvement of the mesenteric or retro-peritoneal glands. With the increase of tuberculosis among cattle, from 20 to 40 per cent., just as we have in our own country, there seems to have been an increase of abdominal tuberculosis in children, 20 per cent., according to Richard Thorne-Thorne. Milk of tuberculous cows, however, is possibly dangerous only when there is tubercular affection of the udder, which occurs in 2 to 3 per cent. Of Row's three hundred cases of abdominal tuberculosis in children, all of them were fed on cow's milk for some considerable period.

No matter whether further clinical experience or pathological experiment shall show confirmation of his views, it is of interest to consider here the frequency of tuberculosis in Northwestern India, given by Dr. Crombie. Tuberculosis seems to be very rare in that country. Of 15,116 deaths forty only were from tuberculosis of the lung, six children and thirty-four adults; no deaths from abdominal tuberculosis or tubercular meningitis. Chevers says he has never seen a case in a native of the plains of India, while it does occur in European inhabitants. The reasons for the lesser prevalence of the disease in India are given by Crombie as follows: (1) The comparative infrequency of bovine tuberculosis in India. (2) The native habit of boiling all milk. (3) The exclusion of beef from the food of a large proportion of the native population. Stall-fed beef is unknown in India, even in the large towns. (4) The flesh of the goat is almost exclusively used by the Mohammedan, that of the sheep by Europeans. The goat is one of the animals almost "refractory" to tuberculosis. Goat's milk is also much used by the natives. (5) The open air occupation of the natives. (6) Abstinence from alcohol. (7) The native of India converts all his butter into "ghi" by a process of boiling and skimming. (8) Children in India have the additional advantage over European children (in India) that their mothers almost invariably suckle them until they are two or three years old.

(9) The comparative infrequency of diseases which seem most frequently to predispose to tuberculosis, namely: measles, scarlatina and whooping cough, which, when they do occur, are milder than in Europe.

LOUISVILLE, KY.

DIABETES INSIPIDUS.*

BY GEORGE JENKINS, M. D.

Professor of Neurology and Physiology of Nervous System, Kentucky School of Medicine.

Diabetes insipidus is a morbid condition characterized chiefly by great thirst and the passage of large quantities of pale, watery, non-saccharine urine of low specific gravity. The disease is dependent upon or associated with a great variety of conditions, which are commonly enumerated as etiological factors, but, unfortunately, no one of these conditions can be determined upon as the specific cause. And whilst a number of morbid alterations and pathological conditions have been demonstrated at autopsy, the majority of such changes are the effects, and the remainder stand in the relation of concomitants or possible casual factors. The most constant pathology, however, is a tubercular or other disease in the region of the fourth ventricle.

A large number of factors, ascribed as causes by the various authorities, have been grouped as follows:

(1) Nervous influences and emotional disturbances. (2) Bulbar disease. (3) Traumatism. (4) Infectious diseases, especially syphilis and influenza. (5) Alcoholism, chiefly inordinate beer drinking. (6) Age—most common in youth and adolescence. (7) Sex—males predominating. (8) Congenital and teratological conditions. (9) Hereditary. (10) Sunstroke. (11) Exposure. (12) Excessive consumption of fluids. (13) Occurring in connection with meningeal disease and chronic hydrocephalus. (14) And a number of cases in which no cause can be assigned.

The consensus of opinion points to the predominance of a nervous influence, and the favorite conclusion is that there is a disturbance of innervation, producing a "renal neurosis," probably acting by dilatation of the renal vessels and a resulting paralysis of their muscular coats.

PATHOLOGY.—There are no characteristic morbid anatomical lesions. Often changes of various kinds have been found in the

* Read before the Louisville Medical and Surgical Society.

nervous system, especially in the medulla, pons, cerebral peduncles and the cerebellum. We would expect the most common lesion to be in the medulla, as Bernard demonstrated that experimental puncture of the bulb would produce a temporary, non-saccharine polyuria. In addition, lesion of the splanchnic nerves may be present, as section of the great splanchnic produces a similar condition. Aside from these are mentioned hypertrophy of the kidneys, dilatation of the ureters and renal vessels, dilatation and hypertrophy of the urinary bladder, and an unnatural permeability of the malpighian tufts.

SYMPTOMATOLOGY.—The symptoms may develop suddenly, following some mental or physical shock, but the usual method is a gradual onset, often taking place in health, the patient simply urinating more and more frequently. The most constant and distressing symptoms are the passage of large quantities of urine and an intense thirst.

The urine is pale and watery in appearance and increased in amount, the average quantity ranging from 180 to 300 ounces per day. Trousseau reports a case in which ninety pints (1440 ounces) were passed daily. The amount is diminished by the development of any intercurrent febrile affection. The urine is of low specific gravity, 1001–1007, and feebly acid or neutral in reaction, with generally an increase of the saline constituents, especially the phosphates, and a slight increase in urea, and absence of sugar and albumen. The urine, upon standing quietly, undergoes ammoniacal decomposition, and becomes turbid from the precipitation of earthy phosphates. It then has a foul, fishy odor.

Thirst is the second prominent symptom, and is excessive, the patient consuming great quantities of water, and has even been known to drink his own urine when the amount of fluids has been unduly restricted.

The mouth and tongue are dry, the saliva reduced in amount, tongue coated, red at the edges, appetite increased sometimes to the extent of bulimia, bowels constipated. Nutrition ordinarily is fairly well maintained, except in extreme cases, when the patient becomes weak and emaciated, this being due, usually, to loss of sleep from the frequent micturition, or some digestive derangement.

The skin is harsh and dry, perspiration is diminished, and occasionally a few furuncles are present.

The temperature is generally slightly subnormal.

The nervous element is always in evidence, and presents a variety

of hysterical and neurasthenic symptoms, vasomotor disturbances, alterations of sensation, amnesia, lack of concentration, mental irritability, restlessness, headache—occipital, vertigo, malaise, neuralgic pains, depressed or absent knee jerk, hebetude, semi coma and even complete coma and convulsions may terminate the disorder. Neuromyelitis and ophthalmoplegias may be present at times. Aside from these there may be present the symptoms of any accompanying or intercurrent condition.

DIAGNOSIS.—Presents little difficulty. The presence and persistence of the thirst and polyuria should be sufficient.

Diabetes melitus presents glycosuria and generally graver constitutional symptoms.

Hysterical polyuria is a transient condition, and there are present the stigmata of hysteria.

Bright's Disease exhibits albumen and casts in the urine, and the characteristic constitutional symptoms.

PROGNOSIS.—The prognosis varies according to the form of the disease; in a few it may terminate spontaneously; in others it remains for years, and they die of some intercurrent affection. Still others present grave nervous symptoms, digestive derangements or other exhaustive conditions, and reach a fatal termination. Diabetes melitus may supervene; or, as in that condition, the patient is likely to develop tuberculosis. On the whole, though, the prognosis as to life is good, and as Senator says, "It is rather a troublesome than a dangerous complaint."

TREATMENT.—If any efficient cause, as syphilis, can be discovered, treat it. Then limit the diet to the digestive capacity. Control carefully the amount of fluids consumed. Quench the thirst by using pellets of ice, rinsing the mouth with cold water, and acidulating the drink. Direct the patient to take some light, systematic exercise. Occupy his mind by indulging in some pleasant diversion, and to keep the skin in good condition by warm baths, with light friction. Residence in a warm climate is productive of good results, but if impracticable direct the patient to wear flannels, and superintend the ventilation and heating of his residence; finally, keep the bowels soluble, the digestion good, and secure plenty of sleep and rest. As to special agents, electricity—preferably galvanism—to occiput and neck. Bromides, pilocarpin, ergot, antipyrine, valerian, the iodides, tonics, massive doses of strychnine, nit. hypo., 1-12 grain, belladonna, opium and its salts, iron, arsenic, lead, gold and sodium chlorides.

muscarine, glonoin, quinine and cod liver oil have all had their adherents, and claims are presented to prove their efficacy. But of these remedies ergot, the coal tar derivations, the iodides and valerian are the most generally used, and probably the most satisfactory.

REPORT OF CASE.

J. H. D., an intelligent man, has been a school-teacher and notary public; was a medical student. His age is twenty-six; height 5 feet 8 inches; weight, when stripped, 105 pounds; slender build; nervous type. Eyes, ears, mouth, teeth, etc., in good condition; tongue pointed, red tips, no coating; heart, lungs and vascular system good. Liver small, kidneys palpable, bladder distended, gastro-intestinal tract in good condition; appetite good, not excessive; bowels move once or twice daily; digestion very good; skin smooth and clear, perspires very little; knee reflex normal. Previous history good; had measles, pertussis, malaria and mumps when young. About five years ago had swelling of feet, with some pain condition; lasted about two months; was attributed to rheumatism; received no treatment. About two and one-half years ago had what was diagnosed as malaria; had no chill; was unconscious at onset for about three hours was pretty sick; confined to bed about two weeks. No history of injury, undue exposure, mental or physical shock, hard work, no bad habits, has never had syphilis nor any disorder of genito-urinary or sexual apparatus; has led a peaceful, quiet life; good food, pure air and good surroundings in small village in Wolf county, Ky. Family history good; father died at sixty-six of some cardiac disease with dropsy; mother living; has phthisic; eight brothers and sisters living and in good health; first noticed present trouble twelve or fourteen years ago, and since then has persistently drunk and passed about one and one-half to two gallons of water daily has had no other symptoms except restlessness and nervousness, and occasional giddiness upon suddenly resuming the upright posture. Temperature generally around 97°. Any mental strain or emotion increases amount of urine.

First Urinalysis.

EXAMINATION OF URINE.—Quantity of 24 hours, 14 pints; Color, faint tinge of yellow; Odor, none; Reaction, neutral; Specific gravity, 1002; Sediment, none.

CHEMICAL EXAMINATION.—Albumen, none; Sugar, none; Coloring matter, —; Urea, $\frac{1}{10}$ of 1 per cent.; Urates, Chlorides, normal.

MICROSCOPIC EXAMINATION.—Uric acid, few crystals; Urates, amorphous; Earthly phosphates —; Calcium oxalate, —; Epithelium, none; Mucus, some; Pus, none; Blood corpuscles, none; Tube casts, none.

Second Urinalysis.

Shows same features, save amount is 12 pints per diem.

General condition improved, health better, nervousness less, dizziness gone.

Regulated diet, exercise and study, modified amount of fluid consumed; gave glycerophosphates of lime and soda, then three valerianates.

LOUISVILLE, KY.

Notices.

SEVENTH INTERNATIONAL CONGRESS OF OTOTOLOGY.

Under the Patronage of the Minister of Public Instruction, Bordeaux, from the 1st to the 4th of August, 1904.

We are informed that the French railroad companies have granted a reduction of 50 per cent. on the price of the voyage of congressists who will go to Bordeaux in the month of August. Persons desiring to assist at the Congress are earnestly requested to have their names inscribed before the 15th of May, to permit the organizers to let them get the necessary instructions, and to effectuate their voyage (railroad tickets), and for their stay in Bordeaux.

The amount of cotisations (25 francs for doctors in medicine and 12 francs for the students) must be addressed to the treasurer, Dr. Lannois, Emile Zola street, 14, at Lyons, and the title of communications to the General Secretary, Dr. Lermoyez, La Botie street, 20 bis, at Paris (8c).

The Tri-State Medical Society of Iowa, Illinois and Missouri will meet in St. Louis, June 15th, 16th and 17th. An interesting program is being prepared, and some of the most distinguished physicians and surgeons of the country will attend the meeting. The President is Dr. W. B. La Force, Ottumwa, Iowa, and Dr. Louis E. Schmidt, 1003 Schiller Building, Chicago, is the Secretary. Dr. James Moores Ball, 3509 Franklin Avenue, St. Louis, is Chairman of the Committee of Arrangements.

W. B. LA FORCE, *President.*

Progress of Medical and Surgical Science.

Deficient Urea in Gout and Lithemia.—The following extract from the *Medical Record* of April 6th, of an article by Richard K. McAllister, of Glenwood Springs, Colo., demonstrates by repeated experiment that in gouty and lithemic patients we have a deficient excretion of urea. He summarizes his experience as follows:

1. That persistent urea excretion is always present in and characteristic of chronic gouty conditions.
2. That the total amount of urea in gout is considerably lower than that found in chronic Bright's Disease, about two-thirds of the amount found in other chronic disorders, and only about three-fifths of the quantity excreted in health.
3. Deficient urea excretion is an important factor in the differential diagnosis between gouty and chronic rheumatic troubles, and between lithemia and certain nervous troubles dependent upon other causes.
4. That it is not present in chronic troubles.
5. It points to perverted hepatic metabolism, and lends color to the Murchison theory of gout, there being in the cases discussed no clinical evidence of kidney trouble in support of the renal theory.
6. A diminished uric acid excretion is, to a certain extent, commensurate with that of urea.
7. Gout, goutiness and lithemia are of the same origin, and but modifications of the same disorder.
8. Chronic gouty conditions are more amenable to treatment, especially to balneotherapy than chronic rheumatic conditions.

A Case of Paratyphoid Fever reported by Wells and Scott in the April 21st number, 1904, of the *Boston Medical and Surgical Journal*.

The chief clinical feature, as given, was a continued fever, which reached 104°F. The pulse was somewhat accelerated and dicrotic. A few rose spots appeared on the abdomen, and the spleen was palpable. Intestinal hemorrhage occurred early in the disease. The patient died during the fifth week of the disease. Agglutination tests with the typhoid bacillus were negative. The reaction of the blood to the

paratyphoid bacillus was not tried. At the autopsy the paratyphoid bacillus was obtained both in the spleen and kidney. The spleen was large and very soft, and the lymphatic apparatus of the intestine was uninvolved, and the mesenteric lymph nodes preserved their normal size. Numerous superficial ulcers were found in the ilium just above the iliocecal valve. There was no infiltration of the tissue around the ulcers, and they resembled the ulcers of dysentery more than those of typhoid fever. There was an absence of the characteristic pathological changes that take place in a typhoid ulcer as described by Mallory, and absolutely no involvement of Peyer's patches.

The anatomical picture of paratyphoid is that of a septicemia associated with splenic enlargement, and occasionally non-specific ulcers in the small intestine.

The Inoculation of Anthropoid Apes with Syphilis.—The April 12 number of the *Boston Medical and Surgical Journal* quotes Metchnikoff, Roux and Lassar as having successfully inoculated Anthropoid apes with syphilis. In the case reported by Lassar the animal's head, lips and ears were scarified, and syphilitic virus from an extra genital chancre was rubbed on these scarified areas, also portions of the chancre were implanted into little pockets made in the forehead of the ape. The animal was then wrapped up in a sheet to prevent his rubbing the virus off. The primary sore referred to was an untreated chancre of the arm of several weeks' standing.

The various sites of the operation healed in from twenty-four to forty-eight hours, and in fourteen days two characteristic lesions appeared on the forehead. These were still quite evident six weeks later when the animal was presented to the Berlin Medical Society, the animal having developed a papular eruption on the soles of the feet, palms of the hands, around the anus and on the forehead. Cervical adenitis was present, also a bald spot on the forehead.

In the experiments of Metchnikoff and Roux, the primary lesion was accomplished with the virus from a primary sore, though virus from secondary lesion had at different times been used with no result.

Laryngeal Crepitation.—Beauchamps (*Semaine Med., Ibid.*, January 30, 1904) describes a sign which he terms laryngeal crepitation, and claims it is present in all cases of pulmonary tuberculosis, frequently before any other sign can be elicited. The physician faces the patient, who is directed to open the mouth slightly. The physician places his right hand on the patient's left shoulder and his left thumb on the

patient's chin, then approaches his left ear towards the mouth of the subject. A fine crepitation may be heard, which is simply an augmentation of the sounds produced in the tuberculous lesion. It is heard during inspiration and expiration, more pronounced in the latter. Sounds may be heard in other affections of the lungs, but they have not the fine crepitant character of the ones described.—*St. Louis Courier of Medicine* March, 1904.

News Item.

Pathological Exhibit at the St. Louis World's Fair.—There will be a pathological exhibit at the World's Fair in St. Louis under the auspices of the American Medical Association. The exhibit, which will be held in the Palace of Education in a gallery over the East main entrance, will be of wide scope, covering the field of general pathology and bacteriology. The President of the Association has appointed the following Exhibit Committee to take charge of the work: *Executive Members*: Ludwig Hektoen, Chicago; A. J. Ochsner, Chicago; W. A. Evans, Chicago; L. F. Barker, Chicago. *District Members*: J. N. Hurty, World's Fair; Frank P. Wynn, Indianapolis; Max Herzog, Philippine Islands; V. C. Vaughan, Ann Arbor; W. W. Keen, Philadelphia; J. S. Billings, Jr., New York; Philip King Brown, San Francisco; Ellsworth Smith, Jr., St. Louis; Allan J. Smith, Philadelphia; F. W. Farham, New Orleans; R. M. O'Reilly, U. S. Surgeon-General. Dr. Ellsworth Smith, Jr., who has charge of the St. Louis district, has appointed the following Advisory Committee to assist him in the organization of an exhibit for his district: Y. H. Bond, H. W. Bond, John Young Brown, B. Meade Bolton, Willard Bartlett, N. B. Carson, O. H. Elbrecht, W. E. Fischel, B. M. Hypes, Bransford Lewis, H. W. Loeb, Robert Leudeking, H. G. Mudd, Henry Schwarz, Chas. Shattinger, H. J. Simon, C. A. Snodgrass, Justin Steer, Hugo Summa, Robert Terry, E. F. Tiedemann and H. Tuholske.—*Medical Record*, April 2, 1904.

THE AMERICAN PRACTITIONER AND NEWS

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Book Reviews.

Morrow on Social Diseases. The Relation of Social Diseases and Marriage by Prince A. Morrow, A.M., M.D., Emeritus Professor of Genito-Urinary Diseases in the University and Bellevue Hospital Medical College; Surgeon to the City Hospital; Consulting Dermatologist to St. Vincent's Hospital, etc., New York. In one octavo volume of 390 pages. Cloth, \$3.00 net. New York and Philadelphia: Lea Bros. & Co., Publishers, 1904.

The object of this work is to set forth the dangers of those diseases that the author has so aptly denominated the social diseases. It is the most comprehensive treatise that has appeared in the English language to the present, and the profession is fortunate in having as its author a man of Dr. Morrow's achievements and recognized ability to first enter this field.

The author sets forth clearly the dangers that arise from the introduction of venereal diseases into married life, the prophylaxis of which is one of the most difficult problems of social hygiene to cope with.

The writer, in pointing out the dangers to the wife, the offspring, and the results of the morbid irradiations in family and social life, fulfills the realization of the highest ideals in preventive medicine, and

while he points out that this duty will fall in greater part to the physician, he also wisely adds, with justice, that every member of the community should be the protector of the wife and mother in the effort to preserve the health and happiness of future generations.

The chapter presenting the author's views upon the "medical secret," and his advice in the exercise of professional discretion are most valuable. It is here that the greatest knowledge of human nature and a profound knowledge of one's subject is required to solve the delicate situations that will frequently enter into the practitioner's life.

Dr. Morrow has divided his book into three parts; the first chapter deals with gonorrhea and marriage, the second with syphilis and marriage, the third with social prophylaxis.

The great length given to the consideration of gonorrhea is, in the opinion of the reviewer, rightly given the space in view of the serious and remote sequela. The subject has been handled in masterly manner, his methods are free from sensational and alarming statements.

The study of this work is highly commended to every thoughtful adult as well as to the physician.

Manual of Surgical Treatment, Vol. VII., 1903. Edited by W. Watson Cheyne, C.B., M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc., and F. F. Burghard, M.D. and M. S. (Lond.), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc. 559 pages illustrated. Philadelphia and New York: Lea Bros. & Co

The subjects dealt with in this volume are the treatment of the surgical affections of the rectum, the liver, pancreas and spleen, the genito-urinary organs, the breast and the thorax.

This work especially commends itself to the younger physician, who often experiences the want of detailed information in the after treatment of his cases. Nothing can, of course, take the place of experience, but this work gives the reader the experience of others and their manner of treatment of cases from the beginning to the termination of the case.

The text is plain and goes into the minutest detail, and there is no reason for the reader to go astray if the instructions are followed, and to the teacher and those experienced in surgery the work is of especial interest, for the reason that it deals with the after treatment of the case, and we are spared the time it would take to read page after page and get out what we want, and in giving the treatment only those methods are mentioned that are considered the best.

The editors and publishers should be proud of the work they have turned out, and the profession should be thankful to have such valuable information at their command.

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Regular meeting at Seelbach's Hotel, April 5, 1904, with the President, Dr. J. W. Irwin, in the chair.

UNUSUAL COMPLICATION OF TYPHOID FEVER.

Dr. W. Ed. Grant: I recently saw an unusual case of typhoid fever. The fever was high, but the case was short, and a few days after convalescence set in phlebitis started up in his right leg, and the duration of that had been about four days. It is one of the uncommon complications we sometimes see. He suffers a great deal, and the fever has returned somewhat. I think there must be a thrombus in the left saphenous vein.

Dr. Carl Weidner: Inflammation of the lining and coats of the veins occurs in typhoid as well as in the arteries, resulting in temporary or permanent obstruction of the vessels. I saw a similar case with Dr. Taylor. The patient had been sick about two and a half weeks, and had a thrombus of the femoral artery and a tumultuous systolic murmur. Coldness of the limb was first noticed, and it was observed that pulsation had stopped entirely. He died a few days later. There was nothing to be done in this case.

Dr. Wm. Cheatham: I have seen some cases of purulent hyalitis following typhoid fever, one that of a merchant who died of that condition. The last one I had died as the result of a thrombus which became infected. It must have been about the fifth week.

Dr. J. W. Irwin: Thrombosis setting in within a few days of the onset of the fever shows that the heart's action must have been weak. I have seen a thrombus of both veins and arteries. I remember a case in a man now prominent in the Pinkerton Detective Agency in Chicago. About the end of the first week a thrombus occurred in the femoral vein, and then the artery became involved. Amputation was considered, but collateral circulation was established and he recovered. Typhoid fever devitalizes every organ in the body, and any complication may occur in the course of the disease.

Dr. W. Ed. Grant: My impression is that typhoid fever is a

disease of the glands of the small intestine. This case is evidently much milder than the others reported. The man is not suffering intensely, and the fever is not high, and there is not much swelling.

Dr. F. W. Samuel: This condition is one of the accidents that occur in the course of all septic disease. This is one of the embolic accidents, and it occurs in the lung as an infarct. It occurs without disease of the vein, and might be in an artery. It also occurs in bones or anywhere else in the body, and may or may not break down. (septic) A septic embolus may stop in any part of the body and give trouble.

As to the pathology of typhoid fever, it is primarily a disease of the intestinal tract in which the lesion is located in the intestinal tract. A general septicemia with lesion in the blood itself and without intestinal lesion, it is ordinarily a septicemia.

Dr. Louis Frank: I have gotten the impression from some of the journals that many physicians now look upon typhoid fever as a specific disease, but not necessarily accompanied by ulceration of Peyer's patches, but they may go through with the characteristic temperature curve and eruption without this ulceration. This may be what is called paratyphoid.

Dr. Ewing Marshall: As far as my reading goes, I think the English writers favor the idea that it is not a true typhoid without the lesion of the glands, but the symptomatology simulates typhoid closely.

Dr. Carl Weidner: We do have typhoid fever without ulceration, but the specific poison does affect the intestines primarily. There is irritation, hyperemia and infiltration, usually followed by a break down, necrosis and ulceration. This occurs because the cells die, but this last stage need not necessarily occur. The germs infect the system in general, and may be found in the spleen and liver. Even in paratyphoid we have intestinal lesions.

Dr. J. W. Irwin: The whole system is involved in the disease, just as in scarlet fever. The local manifestation is in Peyer's patches. When the nervous centers are depressed to the extent that the heart's action is impaired, changes take place, resulting in emboli and thrombosis of veins and arteries:

Dr. M. K. Allen: Presented report of the Louisville Health Board.

MID-YEAR MORTALITY STATEMENT.

Mortality from the leading diseases, as occurring in Louisville during the first six months of the fiscal year ending February 28,

1903, and compared with the same period ended February 29, 1904 :

Diseases.	1902.	1904.
Tuberculosis.....	206	260
Pneumonia.....	172	207
Bronchitis.....	50	63
Heart Disease (all forms).....	165	161
Nephritis.....	8	30
Bright's Disease.....	96	71
Cancer (all forms).....	52	46
Apoplexy.....	60	84
Paralysis.....	54	51
Typhoid fever.....	84	49
Diphtheria.....	45	37
Dysentery.....	19	11
Gastritis.....	33	26
Appendicitis.....	10	11
Peritonitis (non-puerperal).....	25	26
Diseases of liver (non-cancerous).....	26	32
Infantile convulsions.....	41	38
Marasmus (infantile).....	12	17
Inanition.....	96	72
Septicemia.....	10	25
Meningitis.....	38	45
For the above period there was a total death rate of.....	1,811	1,915
Deaths occurring in children under five years.....	427	436
Deaths occurring in persons over sixty years of age.....	418	599
Birth reported during the same period.....	1,899	1,885

Essay by Dr. Carl Weidner : "Tubercular Peritonitis." Under original article in this issue.

DISCUSSION.

Dr. M. K. Allen : I thought I would look up the statistics in the Health Office on this subject, and I was surprised to find that since 1898 there was not a single case of this character reported in the city of Louisville. In 1898 there were six deaths reported from "abdominal tuberculosis," three in 1899, four in 1900, eight in 1902, ten in 1903, and fourteen from September 1st to date. I found no death certificates signed "tubercular peritonitis." I understood the essayist to say that he could recall several cases, some of which died. I do not know who signed the death certificates.

Dr. P. F. Barbour : This condition occurs in children, and I think it is frequently the result of extension from some other focus through the lymphatics. I have never seen a case get well, but in reading discussions of the subject I notice a number of recoveries reported by pediatricists under ordinary medical treatment. While the surgeons

claim a great deal, the opinion of many pediatricists is that medical treatment relieves about as many as laparotomy. I saw one case in consultation where the history pointed strongly to appendicitis, but on opening the abdomen it was found that the trouble was tubercular peritonitis alone. Professor Rachford, of Cincinnati, reports surprising results from the use of guaiacol in ointment, locally.

Dr. W. H. Wathen: Fifty per cent. of the cases diagnosed tubercular peritonitis have had no peritonitis at all, but other diseases of the abdominal organs, and probably 50 per cent. of cases of tubercular peritonitis have not been diagnosed at all. There is often difficulty in diagnosing, and when this is done the condition has often progressed too far for a cure by either medical or surgical treatment. We can not state positively just how the condition arises. The statistics given are of no practical value, as nothing has been proven. The disease is either carried to the intestines through the mouth, though many of the best pathologists in the world now deny the possibility of this, or through some other channel. In some way it gets to the peritoneum, and is frequently found located in the mediastinal glands and lungs.

The remedies proposed are often contradictory. I could report a number of cases apparently cured by laparotomy, though they might have gotten well without it. I remember one lady who lived in New York City and died ten years afterward of tuberculosis in Los Angeles. We do not know much about the curative treatment of this disease, or whether it is practically ever a local disease without other infection of the system. I do not know any subject about which the profession have developed so few facts that can be relied on. All the cases operated upon were not relieved, especially those cases with much effusion. Those that have remained well have been cases where there was a focus of infection. I do not know that I have ever really cured a case.

Dr. F. W. Samuel: I have operated on eight or nine of these cases. I think two or three of them should be in Dr. Allen's report. It has been my experience to have three make recoveries, one having gone seven years and another five. They were localized tuberculosis, and the infected area was thoroughly removed. The others were a general miliary condition discovered while operating for hernia, which was complicated by hydrocele. I could put my hand into the old hernial opening, which was an inch in diameter, the omentum studded with tubercles.

I believe Dr. Weidner rather subscribed to the opinion that the tubercle bacillus differs from the bovine. I believe it has been proven that both are of the same character. It has been proved that the tubercle bacillus will pass through the intestinal tract, the possible infection atriium for primary peritoneal tuberculosis.

As to the surgical treatment, I am rather inclined to turn my cases of general miliary tubercular peritonitis back to the physicians. My last case was operated on for primary tuberculosis of the testicle undergoing caseous degeneration. with hernia and miliary tubercular peritonitis. I think the man will die. I do not think operation will do any good, except where it is localized, as it is found in the uterus and tubes more frequently than the vagina, and in such conditions it may be possible to remove it, as in localized tubercular appendicitis. Where there is general miliary tuberculosis, if it is seen early enough opening of the abdomen may have some effect. It is with the general miliary variety that I have had experience, with no results at all, the cases recovering from the operation, then going into decline and death. I operated on a negro girl in the City Hospital with lesions between every coil of the intestine. I separated them as far as possible, closed the abdomen and got apparently good union. At the end of the sixth week the scar tissue broke down, and she died in a horrible condition.

Dr. W. Ed. Grant: I believe the general practitioner can be greatly helped by the surgeon in these cases. We should treat them medically for a time, and if no improvement results the surgeon should take away the fluid, break up the adhesions, and use iodoform thoroughly. The patient can then be treated medically, and if there is a tendency to relapse I would do a second operation.

Dr. J. A. Flexner: I think it is about time we were stopping speaking about human tuberculosis and bovine tuberculosis. Recent researches have shown that you can take a bovine bacillus, pass it through a lower animal and it acquires the morphology and cultural properties of the human bacillus showing that there are no racial difference between the two organisms.

Dr. Hugh N. Leavell: I would like to emphasize three things:

1. The value to the general practitioner that the surgeon has been. It was almost impossible to make the diagnosis before the advent of the modern surgeon.

2. The value of intestinal antiseptics.

3. The inability to control the diarrhea by colon irrigation.

Dr. J. W. Irwin: I can not believe that the local application of

guaiacol or europin can destroy the bacillus, nor that operation would suffice unless the focus be very small. Cases of tubercular peritonitis are generally secondary. My experience with this disease is entirely unsatisfactory as to life. I have not seen a case recover in thirty years, and am surprised to hear of such wonderful results from simple remedies.

Dr. Weidner (closing): As to operation, I think relief of pressure is the principle thing that is accomplished, but all explanations have been very unsatisfactory. I have seen two cases die within twenty-four hours of the operation. We should establish an immunity first, and then operate.

I have not presented anything new. My own report of cases is too short to be of any value. I have been very strict in my requirements for a cure, and many years of time must elapse.

As to the infection through milk, Roth's report made a strong impression on me, and I believe the human and bovine are the same bacillus. Koch says we need take no precaution against cow's milk, but I am sure he has made a mistake. The bacillus from the cow will produce the disease.

NEW YORK ACADEMY OF MEDICINE, SECTION ON ORTHOEPEDIC SURGERY, MEETING OF MARCH 3, 1904.

BY HOMER GIBNEY, M.D., CHAIRMAN.

The paper of the evening was read before the Academy by John Ridlon, M.D., of Chicago, Dr. Virgil P. Gibney, Vice-President, in the chair. Subject: "A Consideration of the Ultimate Results of the Bloodless Replacements of Congenitally Dislocated Hips."

DISCUSSION.

Dr. H. Augustus Wilson, of Philadelphia, said that after listening to the very elaborate paper of Dr. Ridlon, he felt as if little remained to be said, except possibly with reference to the cases that Dr. Lorenz had personally operated upon in the Jefferson Medical College Hospital, in Philadelphia.

When Dr. Lorenz accepted Dr. Wilson's invitation to hold a clinic in Philadelphia, there appeared to be no suitable cases for him to operate upon. A notice was put in the medical journals, and in a few days cases came in large numbers, the great majority not congenital dislocation of the hip, but all sorts and kinds of deformities.

Twenty cases of congenitally dislocated hips were selected and

submitted to Dr. Lorenz. From these he chose a sufficient number to demonstrate his method of treatment applied to the various ages. The results of the nine cases he operated on in Philadelphia are as follows:

Three perfect anatomical and functional results. These patients are under two years of age, one a single dislocation, the other double. Three cases have good functional results. By that it is meant that they are so far improved over their former condition as to make the trivial limp apparent only to an expert. This gives 66 $\frac{2}{3}$ per cent. successes.

Six out of the nine have good functional results. One was not reduced, a child aged four, who had been previously subjected to various forms of tenotomy, stretching in bed, extension, had worn a brace a considerable length of time. In this case there was failure to produce a reduction. Lorenz attempted reduction and failed, after almost exhausting his strength. It was put up in typical position, and in six months radiograph showed the hip to be not reduced. The ultimate result was great improvement of function.

A double case in six months after the original cast was removed, showed apparent typical replacement. The conditions which made it slip were undoubtedly due to the fact that through a misunderstanding on the part of the physician who had charge of the case (it was not under Dr. Wilson's care) of the necessity for the weight-bearing feature emphasized by Dr. Lorenz. The child was kept at rest, sitting or lying in bed. At no time was it taught any method of extending the legs to get the hamstrings in full extension. It did not step on its foot for six months. The muscles of both legs were atrophied from disuse, the hamstring tendons were contracted, so that the knees could not be straightened, and that made the joint slip from a very shallow acetabulum.

Dr. Lorenz, in June last, saw the case, and found it necessary to etherize the child and stretch the hamstrings again. Notwithstanding the second manipulation upon the hamstring tendons, both hips slipped.

The speaker had been surprised at the low valuation that Dr. Lorenz placed upon the radiographs in cases of congenital dislocation. Dr. Wilson thought they were useful as a matter of record rather than as a test of conditions.

The radiograph of several cases showed a deep acetabulum, completely deceiving those interested as to the real conditions present, which were found to be filled with cartilage and fibrous tissue.

Casually alluding to the results in the thirty-two cases under Dr. Wilson's observation in Philadelphia, he said there had been no paralysis of any sort, nor disturbance of the circulation. In one case there was temporary edema of the vulva, necessitating catheterization for forty-eight hours; after that function returned.

There is a question as to whether we are justified in considering the classification of perfect anatomical results. Perfect anatomical results do not always give the best functional results, and function is the object always desired. It is clearly impossible to make a new hip that will be anatomically perfect in cases that have been born with abnormal hips, and the highest ideal should be to obtain functional recovery, and a functional result is not always obtained in a so-called anatomical replacement.

A boy eleven years of age, by radiograph and palpation, showed a full, anatomically perfect replacement, but he had rigid, stiff hips, which possibly might become limbered up after awhile, but were far from a functional recovery.

We are making too fine a distinction in classes of cures. If we can form a standard of functional recovery we will be attaining higher percentage of successful results, and be doing justice more fully to the man who has taught us.

Dr. Bradford, of Boston, said that the subject of congenital dislocation of the hip had been under such active discussion that it deserved a most thorough, scientific and academic consideration, free from the personal prejudice.

The congenital dislocations of the hip at the Children's Hospital have been carefully examined, and a report has been made of upward of 130 cases by the Orthopedic Staff of the Hospital. This report has been submitted to an independent committee of surgeons, who will publish a statement after a careful examination of the cases, and he did not wish to anticipate the report by an earlier presentation of figures.

The anatomical facts of congenital dislocation of the hip were formerly not well understood, but after investigations of the last thirty years, following the valuable pioneer work of Professor Carnochan, of New York, the pathological anatomy is well understood. The surgical indications made clear by the pathology of the affection used to be met to secure perfect cures. It has been demonstrated in many instances by many surgeons that perfect anatomical cures have been obtained in Europe and this country, and perfect anatomical cures are what all

surgeons aim for and obtain in a certain percentage of cases. How large that percentage of cases is will be determined by further investigation. In the statistics collected at the Children's Hospital in Boston, based on observations dating back for twenty years, the results were most encouraging in that it appeared that the percentage of absolute anatomical cures has been steadily increasing. By cures was not meant functional cures, or transpositions, but results by which the head was replaced in the acetabulum with perfect restoration of gait, shown by measurements, by palpation, by observation and by skiagraph record, and it is probable that in the near future these will be the results that the surgeon will expect to attain.

It was within the recollection of many surgeons that congenital club foot, which is practically a congenital dislocation, was looked upon as a deformity, in which a satisfactory functional result was considered all that was to be desired. We have arrived at a stage of surgical skill by which a surgeon, if he does not obtain a perfect cure in club foot, is prompted to look for some defect in method. Congenital dislocation of the hip may eventually be looked upon as a distortion of a similar class.

Relapses occur after congenital dislocations of the hip have been reduced in a large number of cases. These relapses have been already considered in a paper presented a short time ago before the New York Academy, so the subject will not be again brought up at this present time, although it is one of much interest and importance, and it is at present not yet determined whether the percentage of relapse is greater after reduction by or without incision but Dr. Bradford entirely agreed with Dr. Ridlon that in operable cases the manipulated method, as demonstrated by Dr. Lorenz, was the method of choice. This may not, however, be considered a permanent solution of the question. Improvements in technique were to be expected in this as in other branches of surgery.

At present, in congenital dislocation of the hip, there is a condition which is anatomically well understood. In certain of the older cases, those with bony change, manual reduction is not practicable. In a large percentage of cases in young children, reductions are not only practicable, but possible, and to be expected.

In a certain percentage of these cases relapses occur. Relapse, as we understand after treatment more thoroughly, may be expected to become less frequent. At present manipulative methods are to be tried in all operable cases. Where this fails, owing to a folding of the

capsule in front of the reduced head, incision is advisable. In cases with osseous change, operations upon the bone are to be considered.

It would seem that, anatomically, there is no greater difficulty in the cure of congenital dislocation of the hip than in the cure of congenital club foot, and in the next decade the gentleman of this Academy will, no doubt, when meeting together, consider congenital dislocation of the hip one of the readily curable deformities.

Dr. Whitman said that from his own experience he could not accept the reader's statistics as representative. Two years ago he had presented before the Orthopedic Section of the Academy ten patients cured by the Lorenz method, some of whom had been treated five years before. These patients were actually cured in the sense that no evidence of the former disability remained.

In his opinion in properly selected cases (the younger the patient the better the prospect of cure) 40 per cent. of the cases should be perfectly cured by this method. He did not, however, limit himself to the Lorenz operation, but having failed by that method, he would recommend arthrotomy. By this means one might assure himself that the head of the femur was actually within the acetabulum, or if the femur were so twisted as to make permanent apposition impossible one might restore the normal relation by means of osteotomy. Finally, the old Hoffa-Lorenz operation might serve as a last resort to assure stability, which was hardly possible without bony support. It was true that the best result by this method could not compare with the perfect cures attained by bloodless reduction. The average result, however, was better than after transposition. He was inclined to think, then, that when bloodless surgery had found its limit one should supplement it by other surgery, and that by a more comprehensive treatment, the results would be greatly improved.

Dr. Whitman said that there were different varieties of transposition which had not been recognized, apparently, in the statistics presented. One was caused by hyper-extension, in which the head of the femur was forced too far forward, so that it could be felt and seen directly beneath the femoral artery. In cases of this character the limb remained, when the plaster bandage was removed, in an attitude of abduction and extension: motion could be restored only by persistent manipulation, and in some cases an anesthetic might be necessary to lessen the distortion. Yet in this class of cases the final result was likely to be good, and even perfect, because of the permanency of the reduction. If, on the other hand, the head of the femur was just

outside the femoral artery, the result was usually unsatisfactory, in that the shortening was progressive until the head came to a resting place beside the anterior spine. In only one class of cases could such transpositions be regarded as a good result. If, for example, one had transformed a bilateral posterior into a bilateral anterior displacement the contour of the body was improved, and the symmetrical disability was markedly decreased, but if in such a case one side were actually cured and the other transposed, the surgeon might be accused of injuring the patient because the swaying gait had been changed to a noticeable limp. In such a case one should always perform the open operation with the aim of securing stability, even at the expense of a part of the range of normal motion.

Dr. Jacobi asked the earliest age at which a patient should be operated on when found to have congenital dislocation of the hip. A case might be discovered when a baby was but a few months old; is any operation in order at this time? Usually cases are not discovered at this time, but occasionally they are.

REMARKS BY NEWTON M. SHAFFER ON DR. RIDLON'S PAPER.

I wish, in the first place, to congratulate Dr. Ridlon for the careful and comprehensive analysis of the histories he has presented. While not agreeing with all his conclusions, the paper presents many valuable facts, and however the statistics he presents may be regarded, they form an intelligent basis and a comprehensive one for judging the Lorenz operation and its results. I regret that I am unprepared this evening to give a satisfactory analysis of the results obtained in all the patients coming under my observation. I prefer to make reference to those only who have been under my care, for a longer or shorter time, at the State Hospital. These are only four in number, all operated upon by Dr. Lorenz, either at the Cornell Clinic or at the Hospital.

The lessons conveyed by a study of these cases; their behavior under treatment; their progress after the gypsum splint was removed, and the results thus far obtained are most interesting. But at this date, about fifteen months after the operations, it is impossible to state the ultimate results, and it may be years before this can be definitely determined. In all these cases—and all were apparently successfully reduced—the tendency to the condition known as the “anterior transposition” was marked. I think that Dr. Ridlon's statement that this is due, in a large measure, to the conditions produced by the tearing of all the resisting tissues, especially the muscles and nerves, is correct.

In the after treatment of this condition we should study the "adaptive muscular conditions," as I have termed it, more closely. Normal muscles shorten and lengthen as opportunity is given—as, for instance, in the acquired Talipes Equinus, associated with the shortened leg in hip disease. In infantile paralysis, the shortening of the unparalyzed muscles is always marked. In lateral curvature the same thing is observed. Muscles lacerated as in this operation, for instance, the adductor group, by the force necessary to reduce a congenitally dislocated hip may be so far injured that it may be years before they can regain their normal contractility, if they ever do. Add to this a nerve injury, and the condition becomes more complicated. Studying the results which have come under my observation, I should, in the future, give these muscles a much longer time to recuperate, before discarding mechanical protection. In other words, after the plaster of Paris splint is removed, a simple steel support should be applied, as, for instance, in extensive infantile paralysis, embracing the pelvis with a conventional pelvic band controlling the entire limb to, and involving the foot, with antero-posterior motion only, at the hip, knee and ankle, with or without perineal pads, as indicated. This would place the femur and the hip under the control of the surgeon, and prevent any "anterior reposition," and the "weight-bearing" principle could be scientifically applied, while the patient walks about, with the head of the femur in the acetabulum. Massage, etc., could be used to restore the lost muscular power.

I have applied this treatment to two of the patients now under observation at the State Hospital, who are doing well. I wish I had applied it to two others who have done badly since they left the hospital, with apparently perfect reposition.

Dr. V. P. Gibney said the presentation of the subject by three or four men who had worked so lately in this line, and especially one gentleman who had come from the city of Chicago with a very well prepared paper, and who had given such carefully compiled results, led him to refrain from any discussion. He thought his colleagues would agree with him in saying that the cases operated upon at the Ruptured and Crippled Hospital are hardly ready for presentation of final results. In the last annual report of the hospital he had given a brief resume of results, though far from final. With the opportunities afforded at the hospital he had given a brief resume of results, though far from final. With the opportunities afforded at the hospital for protecting the joints and for operative interference, he thought all

concerned felt that it is best to reserve statistics until a later date.

He believed the results would compare very favorably with those shown by Dr. Ridlon. He thought we had enough this evening for digestion, and he merely wanted to thank the Chairman of the Section, Dr. Homer Gibney, for bringing together this array of speakers.

Dr. Ridlon said, in answering Dr. Jacobi, that the earliest case of congenital dislocation of the hip he had had anything to do with was one of seventeen months. There can be no question that the earlier one operates the easier it is to make replacement and the less the injury. On the other hand, the earlier the operation the more difficult the retention, because the delicate baby's skin does not bear covering as does that of an older child. A baby wets the plaster splint.

One case operated on by him, which he reported as having relapsed because the splint was wetted and bent (the child flexed and the head went out backward) was operated on by Lorenz. The result was anterior and supracotyloid displacement. It is an annoyance to have to change a plaster splint, reeking with urine, almost every week for eight months. Earlier than eighteen months one does not recognize the dislocation; generally not until the child has walked.

In one case a child had club foot and congenital kyphosis, coming for treatment when six weeks old; it was not known that she had a dislocated hip until she was nearly three years old. From two to four years is the period of choice, when the child is old enough to be cleanly.

As to Dr. Whitman's remarks, that the greatest thing to be desired in the treatment of congenital hips would appear to be stability, the speaker would not agree. He had the pleasure of examining cases operated on and cured by Dr. Whitman in 1900. They were certainly replaced and certainly stable, also certainly stiff by the cutting operation. Dr. Ridlon did not consider a stiff hip in a good position as good for a patient to use, or as desirable as a hip with which he can walk, with just a little limp, which can be bent to a sitting position. He thought it best to get a functional result, even if not a perfect anatomical replacement.

Dr. Whitman also spoke of different transpositions. Those cases in which the head has lain back of the artery Dr. Ridlon had called extreme anterior transposition in contradistinction to those lying to the outer side of the artery and on a level with the acetabulum as shown by the X-ray, where the head could be felt, but not seen, while those back of the artery can be seen as well as felt by him.

One point was not brought out in the paper, the ultimate result of dislocation of the head, anterior and directly behind the artery. Some results are counted as good if the head is in this position. Dr. Ridlon did not think we knew what the ultimate result would be when the head is back of the artery, but feared that it may arrest development of that limb with growth. It might not happen, but is to be feared. Dr. Whitman says those lying back of the artery do not go up; this is very likely true.

Dr. W. R. Townsend moved that the thanks of the Academy be extended to these gentlemen for presenting these papers. Carried.

Adjourned.

Health Report.

LOUISVILLE HEALTH REPORT.

Cases and deaths reported to the Health Department for the two weeks ending April 14, 1904, from the following diseases :

Scarlet fever.....	9	0
Diphtheria	8	2
Typhoid	9	5
Tuberculosis.....	14	28
Small-pox.....	5	0
Pneumonia	0	29
Bright's Disease.....	0	7
Heart disease.....	0	16
Old age.....	0	9

Deaths of children under five years same period.....	36
Deaths of persons over sixty years same period.....	38
Total deaths from all causes same period	173
Total births reported same period.	149

M. K. ALLEN, M.D., *Health Officer.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. RUSKIN.

Original Articles.

INJURIES TO THE HEAD.

BY A. DAVID WILLMOTH, M.D.

*Professor of Surgery Kentucky School of Medicine, Visiting Surgeon Louisville City Hospital,
and Kentucky School of Medicine Hospital.*

It would be impossible for a man in any one paper to deal with all the injuries and their sequela about the head. And tonight I shall only call your attention to a few of the most common and most important ones.

First, to classify our work for study, we will say that injuries of the head may be topographically classified as superficial, or extra-cranial, cranial and intra-cranial; any one may occur alone or in complication with the other. External injuries only present two points of interest to us; the first is they aid us in diagnosis, and the second, and by far the most important being where we have cutaneous wounds, they afford a possibility for meningitis and the resulting cerebral abscess to take place, by being a ready avenue for infection. The cranial injuries are contusions and fractures, and contusions here have no closer relation to intra-cranial lesions than do contusions of more superficial structures, while fractures are of great interest, and especially fractures of the base of the skull. It must be remembered that it is not the fracture primarily that gives us so much anxiety, or is so fatal to the patient, but that it is the complications which dominate

the case ; for we have all seen a large comminution where no complication existed devoid of dangerous symptoms, while in many fractures of the base, while they may be only a simple fissure in appearance (when seen in the post-mortem room), are so rapidly fatal that the patient dies of complications before the surgeon has time to get in the case.

The complications of cranial fractures are cerebral and meningeal, and in either one may be laceration, contusion, hemorrhage or inflammation, the last named being a sequela, since it is not the direct product of the violence that caused the fracture, but the result of infection later, the opportunity for which was afforded by the fracture. Since the symptoms that we see presented in injuries of the head are due to complications, we will speak first of the most common and least important of these, which is concussion. The word concussion has been used almost from time immemorial by the earlier masters of our art, and was used by them in a much broader sense than we now speak of it. It is merely a disturbance of brain function without any gross mechanical lesion. While we admit the condition does exist, we also recognize the fact that many cases that it was formerly applied to should have been classed as those of contusion. Clinical experience, however, has proven the fact that affections of the central nervous organs can and have been produced experimentally without occasioning discoverable solution of continuity of substance.

Therefore surgeons have been lead to accept a physiological basis for this condition. This was proven years ago by Koch and Filche, who conceived the idea of producing the same effect by series of light blows as by one severe one ; no one center of the brain is affected, but all are altered in the same way and at the same time. Although it is true that the description and history of cases of cerebral concussion are variable and contradictory, it is equally true that the symptoms present a constant clinical picture with a character of its own, with which you are all familiar, consisting of rapid and feeble pulse, quick and shallow breathing, palor of the skin, copious perspiration, partial or complete loss of consciousness, muscle incoordination, lack of sphincter control, etc., all of which can be produced frequently in the same patient by experimentation each time the individual returning to the normal in a short time after the experiments cease, and which is believed to be the result of only a transitory disarrangement in the central nervous tissue, and unless this is granted concussion resolves itself into contusion, or what might be properly termed cerebral pressure.

Simple cases of concussion require no treatment other than that for shock, a condition which it simulates in every respect.

The next, and one of the most common conditions, and one we are called to treat goes a step further than that of concussion of the brain, and presents a combination of symptoms known to us all "compression of the brain," which is a condition of great clinical and particular therapeutic importance. It enables us to not only recognize conditions such as cerebral abscess, tumors and blood clots on the brain, but it furnishes us an opportunity to remove them. It saves the lives of many in the same way that tracheotomy does by removing a foreign body from the throat that threatens to suffocate while trephining saves the lives by relieving compression by a blood clot between bone and dura.

The symptoms of compression are, according to the best authorities, believed to be the result of limited, impeded and retarded circulation of fresh oxygenated blood to the brain (adiamorrhysis of Giegel) this has been proven by the well known experiments of Kussmaul and Tenner, the causes for which are changes of shape of bony capsule itself, whether these be localized or general; second, increase in quantity of cephalo-rachidian fluid, edema of the brain, or exudates, foreign bodies in the cavities of the skull, pathological formations which have encroached on the intra-cranial space. These may be blood, pus, or new growths. The symptoms of cerebral pressure may be divided into two stages: the stage of stimulation, with headache, vomiting, restlessness, delirium, flushing of the face, contracted pupils, choked disc, increased blood pressure and beginning slow pulse; this is followed by stage of paralysis, loss of consciousness is now developed into stupor and coma. Respiration is stertorous and intermittent; pulse, instead of being slow, has increased continually and become rapid, and if the compression is great enough respiration becomes of the Cheyne-Stokes variety and soon ceases, the heart being the last to give up the struggle. The patient long before death presents signs of localized injuries to certain areas of the brain, which manifest themselves by mono or hemiplegia.

The course of intra-cranial pressure will depend on its cause. In the first place it will depend upon whether the encroachment is a permanent one, or whether the compression is the result of causes which will demand more space, or whether they will become altered in some way and demand less space. Examples of the first variety are seen in depressed fragments of bone, which, unless relieved by operative

procedure, produce a permanent and constant encroachment on the cranial cavity, while in extravasations of blood we have an increasing pressure until the bleeding vessel is closed by either pressure or coagulation; while, on the other hand, the rapidly forming abscess progresses continually, and therefore produces constantly increasing tension. The first thing for us to determine is which variety we are dealing with, whether it is progressing or receding, for this will govern us largely in what we do in the way of treatment, for it is a well known fact, found out by experiment and proven by experience, that a high degree of pressure may be borne, provided it acts only momentarily, while long continuous pressure hinders recovery, and finally renders it impossible by depriving that part of the brain of the arterial blood for so long a time that degenerative processes may have already set in.

Other injuries received at the same time may alter or control the course of compression of the brain.

TREATMENT.—The treatment of the cerebral pressure consists almost always in the removal of the cause, provided the necessary surgical interference does not involve more danger than the pressure itself. This may be accomplished by two operative procedures, opening the skull, and puncturing the brain; if the conditions be intra-cerebral, the details of the treatment depending on the conditions found, which we speak of in their proper place.

One of the most frequent results of trauma is injury to the intra-cerebral vessels, the middle meningeal artery and its veins comprising nine-tenths of the cases. This is due to its anatomical arrangements being close to the skull, and if not encased, being connected with it by small perforating branches thereby making it impossible for the vessels to stretch when the skull changes shape at the moment of impact. The sinus of the dura mater and the torcular herophili are next in order of frequency. Then the larger veins of the piamater emptying into the larger veins of the sinus, then that portion of the carotic artery lying in the skull; injury to the diploe emissary and jugular veins being rare, and therefore of no significance.

Injuries to the blood vessels are of interest for the reason that they may be present in cases where no fracture exists, and may exist on the opposite side of the head from where the injury was received as the result of injuries contrecoup. The effect of hemorrhage from any of the intra-cranial vessels almost always leads to compression, the circulatory disturbances depending on shock may prevent the bleeding from the artery for a longer or shorter time, but just as soon as reaction

can take place bleeding usually asserts itself. It may, however, be delayed for a number of hours or even days, when the patient in a fit of coughing or some other violent exertion removes the clot and a secondary hemorrhage takes place, or this might be produced by a condition of suppuration at the site of injury. Bleeding in either case usually continues until the arteries close by a temporary thrombi, or until the extravasation of blood within the cranium equals the blood pressure within the arteries. In this form large amounts of blood may escape, and frequently does, to the amount of five or six ounces. If the dura be injured, blood may accumulate outside the dura, while in the majority of cases it occurs below the dura, and in not a few cases it accumulates in both places.

The symptoms will depend largely on whether the hemorrhage is internal or external; the clinical picture will be much more complicated where the accumulation of blood takes place between the bone and dura; the symptoms, all, more or less resemble concussion of the brain in extra dural clot, and are only to be differentiated by the manner of development and particular location.

The symptoms of all intra-cranial hemorrhage are caused by general pressure, and consist of disturbances of consciousness, change in pulse and respiration; while the disturbances of speech, power and motion, and changes in the pupils may be classed as local; the most important and the one most characteristic is the mental disturbances, especially the "free interval." Occasionally, however, we see cases where the symptoms of concussion continue into those of compression, and by this more or less obscuring the case. The duration of the free interval is variable, being anywhere from a few minutes to a day. Those cases lasting longer are extremely rare, and must be explained by special circumstances; another sign that will aid us materially is the character of the pulse, where after a normal pulse the patient begins to present a pulse that is becoming slower, harder, with more tension—the so-called pressure pulse—we may be sure that we have a hemorrhage to deal with. Another symptom, and a peculiar feature, is the rise of temperature which takes place in a few cases, and is hard to explain. The prognosis of all intra-cranial hemorrhage is necessarily grave, some placing the mortality as high as 90 per cent. The treatment must fill two indications: arrest the hemorrhage and relieve the pressure. In external hemorrhage loose splinters of bone should be removed, and if any depression exist these should be elevated, and all sharp edges trimmed; or, in other words, the wound reduced to the

simplest form. The hemorrhage can usually be dealt with through the original opening, but if this is impossible the surgeon, with rongeur forceps or chisel and mallet may enlarge the opening until the bleeding point is found, the trephine seldom being necessary; both the distal and the approximal end of the vessels should be tied when found with either catgut or silk, and those cases where it is impossible to discover the bleeding point tampon should be resorted to. Active interference is called for in these cases, for the surgeon is confronted with, not whether, but how and when to proceed. All extravasated blood must be removed, and not allowed to remain with the hope of spontaneous removal, for if allowed to remain the actual indication for the operation is not fulfilled, and the clot, even with the strictest asepsis, may become infected, and the immediate favorable results rendered negative by a complicating meningitis, or if this does not occur infection gains entrance into the site of injury, and an abscess is the result. This is especially true in open wounds of the skull, or it may gain entrance into the wounded tissue from the ear or nose, the abscess being usually limited to the site of injury, and if opened early a leptomeningitis will be prevented. Usually there is a collection of pus beneath the pia and the piamater itself infiltrated. If a diffuse meningitis does not develop and the pus is promptly evacuated, recovery will usually take place, while in other cases the acute abscess may pass into a more chronic form by the pus focus becoming encapsulated. This abscess can gradually extend, and suddenly prove fatal after months or years by important brain areas becoming involved or by the abscess rupturing into the ventricle.

THE DIAGNOSIS AND TREATMENT OF DIPHTHERIA.

BY DR. W. F. BOGGESE.

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When your Secretary was kind enough to do me the honor to ask me to again read a paper before your splendid society, I felt that the compliment deserved a better paper than I could at this time write. A ready assent and compliance with his request was the only way in which I could show my appreciation of this honor.

AS TO DIAGNOSIS.

The specific bacteriological investigation of Klebs-Loeffler and

proof of the true infection of diphtheria has somewhat simplified this question, as far as the bacteriological evidence can be made use of. The clinical evidence and proof is all that the general practitioners, outside of the cities, the great body of the profession can depend upon. While the bacteriological diagnosis is in some respects more exact than the clinical, it, however, has its limitations. As Welsch states, the mere presence of the diphtheria bacillus in the throat no more proves that he has diphtheria than the presence of the pneumococcus in the saliva proves that he has pneumonia. On the other hand, the absence of the bacillus in the throat or on the swab no more disproves the presence of diphtheria than the absence of the tubercle bacillus in the sputum denies the presence of tuberculosis. Yet either method of diagnosis without the other may be misleading. We see in our daily work two types of membranes in the throat, the one termed pseudo-diphtheria, produced by the streptococcus, staphylococcus, possibly the Pfeiffer bacillus, as well as with some of the infectious diseases, particularly measles and scarlet fever. The other type is that of the true diphtheria, produced by the Klebs-Loeffler bacillus, ordinarily primary, but may be complicated with some of the other infections. Clinically, there are some cases where it is almost impossible to diagnose many throat affections from true diphtheria. The differential diagnosis that I am in the habit of teaching my students is as follows:

DIPHTHERIA.

1. Exposure to infection from previous cases of diphtheria.
2. Greatest liability in early years—first to fifth year.
3. Membrane either seen from the first upon pharynx, fauces or uvula, as well as tonsils, or rapidly extends to those parts.
4. Membrane firmly attached to underlying tissue, and not easily rubbed off.
5. If membrane be removed leaves bleeding surfaces.
6. If removed, membrane is very rapidly reproduced in even greater amount.
7. Discharge from nose thin, irritating, often bloody, and produces eczema of upper lip.
8. Submaxillary and cervical lymph nodes swelled and tender.
9. Membrane may be seen upon buccal membrane, tongue, angles of the mouth or lips.
10. Onset gradual, temperature low at beginning.
11. Constitutional depression more marked, pulse weaker, and in children more prostration.

12. Course longer, usually five to eight days before marked improvement is seen.

13. Albuminuria almost constant. Nephritis not infrequent.

14. Larynx often involved by extension.

15. Paralysis more or less constant of certain groups of muscles may occur as a complication or sequela.

16. Toxic symptoms common; asthenia; great anemia after fourth or fifth day. Later, sudden heart paralysis, post-diphtheritic paralysis of throat, eyes or extremities.

17. Peculiar fiery purplish blush on whole throat.

PSEUDO-DIPHTHERIA.

1. No such exposure. Arises independently.

2. Occurs at any age.

3. Membrane limited to tonsils.

4. Membrane loosely attached and easily removed.

5. Membrane may be removed without such bleeding.

6. Reproduction of membrane not so rapid or extensive, if at all.

7. Nasal discharge not so common as in simple mucopurulent, as seen in simple catarrhal rhinitis.

8. Swelling of lymphatics not so marked in primary cases. It is, however, regularly met with in the inflammation of scarlet fever, etc.

9. Not seen upon those parts.

10. Onset more sudden; temperature higher.

11. Constitutional symptoms proportionate to temperature; more moderate. Pulse rapid, but not weak. Depression not so marked.

12. Course shorter, one to four days except in cases complicating infectious diseases.

13. Does not occur.

14. Larynx rarely attacked secondarily, except in measles and scarlet fever.

15. No such paralysis seen.

16. Septic symptoms seen; toxic symptoms never seen. No paralysis.

17. Inflammatory reddening.

Diagnosis of primary nasal cases are sometimes difficult:

1. Thin, irritating mucopurulent discharge, often brownish from presence of blood, is quite different from the abundant ropy mucus from simple catarrhal inflammation.

2. Excoriation of the nose and upper lip caused by the discharge is suggestive of diphtheria.

3. Careful inspection may show white or grayish white membrane in the nose.
4. Constitutional symptoms of true diphtheria.

TREATMENT.

I shall not take up your time with the discussion in this paper of that most important subject of prophylaxis. The real duty of the modern physician should be the prevention rather than the cure of the disease. There is no disease other than small-pox in which so much can be done along this line as in the prevention of diphtheria. The doing away with public funerals, the closing of schools, rigid quarantine of infected and exposed persons, immunization of exposed persons, methods of disinfection of physicians and nurses, selection and care of the sick room and its after disinfection, are all subjects of practical interest and importance.

ANTITOXIN.

With the advent and general use of antitoxin, our treatment of diphtheria and its results have been revolutionized. Today a physician who would hesitate one moment to use antitoxin is guilty of malpractice; and a physician who could but would not use in the beginning of a case, if the patient should die, is almost a criminal. The mortality of diphtheria before the advent of antitoxin is well represented by the table from an article by Biggs and Guerord:

Up to one year, 30 per cent.; one to three years, 45 per cent.; three to five years, 40 per cent.; five to ten years, 17 per cent., giving a general average of 45.5 per cent.

Now compare this table with the wonderful results of antitoxin, taking the figures as given by the American Pediatric Society, report of 1896, and the Chicago Board of Health report in 1900, with even a much better report since. Taking all the cases in which antitoxin was administered, and the time of the disease at which it was given, we have the following report:

Injected first day, 4.9 per cent.; injected second day, 8.3 per cent.; injected third day, 12.7 per cent.; injected fourth day, 22.9 per cent.; injected later, 38.9 per cent. Out of 3,175 cases, giving a total of 13 per cent.

Or the following report of the Chicago Board of Health up to 1900:

Injected first day, .27 per cent.; injected second day, 1.67 per cent.; injected third day, 3.77 per cent.; injected fourth day, 11.30 per cent.; injected later, 25.37. Giving out of 4,071 cases a total of 6.77 per

cent. These figures offer a demonstration of a fact which can not be controverted.

Are there real or alleged dangers from the injection of antitoxin? I answer this question negatively. I believe the serum itself to be harmless. I do not believe there has as yet been produced and proved a single bad effect of antitoxin upon the heart, kidneys or blood, notwithstanding the fact that alleged cases have been reported. Every one of these conditions alleged to be due to antitoxin was seen before the advent of antitoxin, and even more frequently than since. We may have, and do in many cases, some slight local effects, such as redness, pain, slight transient edema at the site of injection; and later, from the fifth to the twelfth day, a general eruption of erythema or urticaria, and occasionally swelling of the joints.

As to the time of administration, the figures that we have enumerated above demonstrate the fact that the earlier the antitoxin is administered the more favorable the results, and that even late we can expect benefit.

As to the point of administration, the injections of antitoxin may be made into almost any part of the body, as the quantity of serum now used is small. The abdomen, the back and the outer aspect of the thigh are the points preferred. I rarely ever give it except in the thigh.

The method of administration is by hypodermic syringe capable of holding five cubic centimeters, the so-called antitoxin syringe, or by one of the self-injecting appliances as furnished by the chemical houses. I prefer the use of Mulford's, Park Davis' or Stearns' apparatus.

The amount to be administered is not so definite. As a rule, for children under two years I give the concentrated antitoxin, from 1,000 to 1,500 units. In the severe cases from 1,500 to 4,000 units in children over two years. These injections may be repeated every twelve to twenty-four hours if the desired results are not obtained. I have given in one case as high as 15,000 units. The constitutional effects of the injection are characterized by fall of temperature within twenty-four hours, the pulse improves, the mind becomes clearer, membrane not spreading, oftentimes beginning to enfoliate, and in the very severest cases we find these quickly transformed into mild ones. There is no question that the use of antitoxin has almost done away with the necessity for intubation. I wish I could take the time to give the facts and statistics on this subject.

While I rely upon antitoxin for its specific action, it is important that we use every other means that we have at our command to combat

the disease. It is important that our patient be kept quiet, in a well aired room, and be kept in bed; special attention should be given to nourishment; in very young infants this is of the greatest importance. If the child is unable to swallow, we can feed it by the rectum or through the nose with a catheter and funnel, and if vomiting comes on in the latter stages, we should rely upon rectal feeding for a few days.

Stimulants play a very important role in our treatment of this disease. Stimulation should be begun as soon as the prostration and depression are evidenced by the character of the pulse and the general condition of the patient. This frequently comes on the third or fourth day, or even later. In the administration of stimulants you should be guided by the necessities of the case. There is no disease in which the same quantity of alcoholic stimulants can be administered as in diphtheria. To a child two or three years of age you can give from four to eight ounces of whisky in the twenty-four hours. In one adult case, in a woman, she drank a gallon and a quart of whisky in less than forty-eight hours, to which she owes her recovery. Strychnia, caffeine, camphor hypodermatically, are all of value in threatened heart failure. Attention should be given to the condition of the kidneys, and the child should be encouraged to drink all the water and liquids possible.

Very little other internal medicine is necessary other than those the symptoms may demand. Calomel may be given with safety and benefit in even large doses. Before the advent of antitoxin I used to rely upon the internal administration of iron and glycerin in large doses, and the internal administration of methylene blue.

LOCAL TREATMENT.

This very important line of treatment should not be overlooked. It is, however, of secondary importance since the advent of antitoxin. The purpose of local treatment is the cleansing of nose, mouth and pharynx, prevention of the aspiration of the disease into the lungs, and the prevention of intestinal toxemia. In cases where it is necessary to disturb the patient greatly, and you are compelled to use force, you had best not attempt any local treatment other than the internal administration of such remedies as borolyptyl, pasteurine and the like. When local treatment can be easily given and is indicated, I use an application of methylene blue, one drachm to the ounce. I am sure that, next to antitoxin, the methylene blue treatment served me best of any.

For simple cleansing the alkaline washes, Dobell's or Seiler's solu-

tion diluted, or glycothymoline may be used. If there is nasal hemorrhage, or great turgescence of nasal mucous membrane in the nose, I do not hesitate to spray the nose, or even the throat, with a weak solution of adrenaline chloride. If the child is old enough gargles, of course, are beneficial. While external applications to the throat have practically no effect upon the disease, they often relieve pain and tension in the swollen lymphatic glands. External application of oil of wintergreen in camphorated oil and cold compresses complete the list of the external remedies I use.

AS TO CONVALESCENCE.

As long as the knee jerk is absent, and as long as any albumin remains in the urine, just so long should our patient be considered in great danger. I think I have seen sudden death from heart paralysis in several cases where, as long as the patient was in bed, the heart showed no sign of failure, but by early exercise heart failure supervened. Patients should be kept in bed for at least a week after the throat has cleared, and longer if any cardiac weakness is observed. The pulse should be carefully watched. An abnormally slow pulse is more dangerous than one which is rapid. These patients should be kept recumbent and absolutely quiet.

After treatment of hematics and reconstructives should be given in every case. Iron, cod liver oil, wine, fresh air, sunlight and everything else to overcome that extreme degree of anemia that often supervenes upon diphtheria.

Health Report.

LOUISVILLE HEALTH REPORT.

Cases and deaths reported to the Health Office during the period from April 15, 1904, to April 28, 1904, inclusive :

Scarlet fever.....	11	0
Diphtheria	8	1
Whooping cough	1	1
Typhoid	8	5
Tuberculosis.....	3	32
Small-pox.....	4	0
Heart disease.....	0	22
Pneumonia	0	35
Bronchitis.....	0	6
Bright's Disease.....	0	10

Total deaths from all causes during above period..... 201

M. K. ALLEN, M.D., *Health Officer.*

THE KENTUCKY STATE MEDICAL LAW.

(As amended in 1904.)

SECTION 1. A Board to be known as the State Board of Health is hereby established. It shall consist of eight members, all of whom shall be legally qualified registered practitioners under this act, seven of whom shall be appointed by the Governor by and with the advice and consent of the Senate, and the eighth member, who shall be the secretary and executive officer, shall be elected by the board, and by virtue of his office of secretary shall be a member of the board. One member of the board shall be a homeopathic, one an eclectic and one an osteopathic physician, and the other appointed members shall be regular, or allopathic physicians, all to be appointed by the Governor from lists of three names for each vacancy, furnished respectively by the State, Society or Association of such schools or systems of practice as are entitled to the member, and the successors of such members shall be appointed in the same manner. If the board shall elect one of its members secretary, as it may do, the Governor shall appoint another member to complete the full number of the board. The president and secretary shall have authority to administer oaths for the purposes of this act, and the members of the board shall, before entering upon the discharge of their duties, take the oath prescribed by the Constitution for State officers.

SEC. 2. It shall be the duty of the county clerk of each county to purchase a book of suitable size, to be known as the "Medical Register" of the county, and to set apart one full page for the registration of each physician; and when any physician shall die or remove from the county, he shall make a note of the same at the bottom of the page; and said clerk shall, on the first day of January in each year, transmit to the office of the State Board of Health a duly certified list of the physicians of said county registered under this law, together with such other information as is hereinafter required, and perform such other duties as are required by this law; and such clerk shall receive the sum of fifty cents from each physician so registered, which shall be his full compensation for all the duties required under this law.

SEC. 3. It shall be unlawful for any person to practice medicine, in any of its branches, within the limits of this State, who has not exhibited and registered in the county clerk's office of the county in which he resides his authority for so practicing medicine as herein prescribed, together with his age, address, place of birth, and the

school or system of medicine to which he proposes to belong ; and the person so registered shall subscribe and verify by oath, before such clerk, an affidavit containing such facts, which, if wilfully false, shall subject the affiant to conviction and punishment for perjury.

SEC. 4. Authority to practice medicine under this act shall be a certificate from the State Board of Health, registered in the county in which the holder resides ; and said board shall issue a certificate to any reputable physician who desires to practice medicine in this State, who has passed a satisfactory examination before it, in the branches of medicine, as taught in reputable medical colleges ; and the board shall, upon application, admit to examination any person of good moral character, who may possess any of the following qualifications :

1. A diploma from a reputable medical college, legally chartered under the laws of this State.

2. A diploma from a reputable and legally chartered medical college of some other State in the Union.

3. Satisfactory evidence from the person claiming the same that such person was reputably and honorably engaged in the practice of medicine in this State prior to February 23, 1884.

Applicants may present their credentials by mail or proxy, and shall receive due notice of the place and date of examination. Certificates shall be signed by the president and secretary, and attested by the seal of the board, and the fee for each examination, including the certificate, shall not exceed the sum of ten dollars. The members of the board shall be entitled to receive ten dollars per day and their necessary traveling expenses for each day devoted to such examinations, to be paid from the fees provided herein, and the board shall have authority to provide for such assistants as it may deem necessary and pay for the same from the fund arising from such fees.

SEC. 5. Examinations shall be held at least semi-annually at Frankfort, Louisville, Lexington, or other centrally located places, and on such dates as the board may deem will best suit the convenience of applicants. The questions for all examinations in the branches common to all schools or systems of practice shall be prepared by a committee of the board to consist of five members, one of which shall be a homeopath, one an eclectic, and one an osteopath, and said committee shall conduct all examinations and grade the same, and when any applicant has made the average prescribed by law, and is so graded, the Board of Health shall admit such applicant to the practice of his or her profession in this State. All examinations shall

be conducted in writing, and in such manner that the result shall be entirely fair and impartial, the applicants being known by numbers so that no member of the board shall be able to identify the papers of any applicant until they have been graded and the case passed upon; and all questions and answers, with the grade attached, shall be preserved for one year. All applicants examined at one time shall have the same questions asked them in anatomy, physiology, obstetrics, and the other branches common to all systems of practice, and shall be required to make an average grade of 70, with a minimum of 60 in any one branch; but all examinations, involving methods or principles of treatment, shall be made and graded by that member of the board who represents, or most nearly represents, the school or system of practice to which the applicant belongs, or the board may, in its discretion, omit the examination in such branches. No member of the board shall be a stockholder or member of the faculty or Board of Trustees of any medical college.

SEC. 6. Any person engaged in the practice of osteopathy in this State prior to February 1, 1904, who holds a diploma from a reputable osteopathic college, having a course of not less than four terms of five months each, legally chartered under the laws of any State in this Union, as determined by the osteopathic member of the board, and who makes application to the State Board of Health within ninety days after the passage of this act, accompanied by the fee hereinbefore provided, shall receive a certificate from the board without an examination, which, when registered in the office of the county clerk of the county of his residence, as required of other certificates issued by the board, shall authorize the holders thereof to practice osteopathy in this Commonwealth, but it shall not permit him to administer drugs, nor to perform surgical operations with the knife. The words, "practice of medicine," in this act, shall be held to include the practice of osteopathy. But no person shall be permitted to practice osteopathy in this Commonwealth without an osteopathic diploma and certificate as provided in this section.

SEC. 7. Any person engaged in the practice of medicine without authority to treat the sick or injured, or in any way discharge the duties usually performed by physicians, whether by medical, surgical or mechanical means, shall apply to the State Board of Health, who shall examine them as to their competency in such manner as they may deem fair and best, but such examination shall always include

anatomy, physiology and pathology, and the term, "practice of medicine," as used in this act, shall be construed to be the treatment of any human ailment or infirmity by any method; but this shall not include trained or other nurses, or persons selling proprietary or patent medicines, when not traveling as a troupe or troupes composed of two or more persons.

SEC. 8. That any itinerant medical company of two or more persons traveling as a troupe or company as vendors of any drug, nostrum, or instrument, shall pay to the board a license of \$100 per month, which shall be at once converted into the State Treasury. The board shall issue a license to reputable and worthy applicants under this section upon payment of the fee each month, but may for sufficient cause refuse such license. Any such itinerant vendor traveling as a company or troupe, with two or more persons as members or in its employ, who shall treat or profess to treat or cure disease or injuries by the use of any drug, nostrum, or instrument without license to do so, or shall sell the same for such purpose, in violation of this section, shall, upon conviction, each and every person so engaged, be fined fifty dollars for the first offense, and upon each subsequent conviction shall be fined one hundred dollars.

SEC. 9. Nothing in this law shall be construed as to authorize any itinerant doctor to register or to practice medicine in any county in this State.

SEC. 10. Nothing in this law shall be so construed as to discriminate against any peculiar school or system of medicine, or to prohibit women from practicing midwifery, or to prohibit gratuitous services in case of emergency; nor shall this law apply to commissioned surgeons of the United States Army, Navy or Marine Hospital Service, or to legally qualified physicians of another State, called to see a particular case or family, but who does not open an office or appoint any place in this State where he or she may meet patients to receive calls.

SEC. 11. The State Board of Health may refuse to issue the certificate provided for in this act for any of the following causes:

1. The presentation to the board of any license, certificate or diploma which was illegally or fraudulently obtained, or the practice of fraud or deception in passing the examination.

The commission of a criminal abortion, or conviction of a felony involving moral turpitude.

3. Chronic or persistent inebriety, or addiction to a drug habit, to

an extent which disqualifies the applicant to practice with safety to the people.

4. Or other grossly unprofessional or dishonorable conduct of a character likely to deceive or defraud the public.

The board may suspend or revoke a certificate for any of the causes for which it may refuse to grant a license under the provisions of this act. In all proceedings for suspension or revocation under this act the holder of the certificate shall be furnished with a copy of the complaint, and shall be given at least thirty days thereafter to prepare for a hearing; and he shall be heard in person or by counsel, or both, as he may elect, and in such hearing and in all matters arising in the course of their duties, the president and secretary shall have authority to administer oaths; and in such hearing the board may take oral or written proof for and against the complaint, as it may deem will best present the facts. In all cases of refusal, suspension, or revocation, the applicant or holder may appeal to the Governor, who may affirm or overrule the decision of the board. Upon the suspension or revocation of any certificate, it shall be the duty of the board to give official notice of such action, under seal, to the county clerk of the county in which the holder is registered, and such name shall be marked as suspended for the period indicated, or stricken from the register, in accordance with such notice, and if such holder shall continue to practice he shall thereupon be subject to the penalties provided in the law to which this is an amendment.

SEC. 12. This act shall take effect and be in force in accordance with the provisions of the Constitution, but is expressly provided that all certificates issued by the board under the provisions of the law to which this is an amendment, are hereby confirmed and continued in force, and all students who are matriculated in any medical or osteopathic college in this Commonwealth on or before February 1, 1904, and shall have graduated prior to September 1, 1907, and make application to the board prior to January 1, 1908, shall receive certificates without examination. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

SEC. 13. It shall be the duty of the State and local boards of health to bring to the attention of the courts any violations of the provisions of this law within their respective jurisdictions.

SEC. 14. Any person living in this State, or any person coming into this State, who shall practice medicine, or attempt to practice medicine in any of its branches, or who shall treat or attempt to treat

any sick or afflicted person by any system or method whatsoever, for reward or compensation, without first complying with the provisions of this law, shall, upon conviction thereof, be fined fifty dollars, and upon each and every subsequent conviction shall be fined one hundred dollars and imprisoned thirty days, or either or both, in the discretion of the court or jury trying the case; and in no case where any provision of this law has been violated shall the person so violating be entitled to receive any compensation for the services rendered. To open an office for such purpose, or to announce to the public in any way a readiness to treat the sick or afflicted shall be deemed to engage in the practice of medicine within the meaning of this act.—*Kentucky State Medical Association Bulletin.*

NEW YORK SCHOOL OF CLINICAL MEDICINE.

Gentlemen:

Some notable changes and additions having recently taken place in the Faculty, etc., of our School, we should esteem it a favor if you could find a place for the following in the "news" department of an early issue as a matter of interest to the profession in your territory:

At the meeting of the Medical Board of the New York School of Clinical Medicine, held April 9, Dr. J. L. Adams was elected Secretary of the School, and professorial and other distinctions were conferred upon the following in the departments specified: Mental Diseases—Professor E. C. Dent, Superintendent Manhattan State Hospital West, Ward's Island; Internal Medicine—Professor Wm. Brewster Clark, M.D.; Associate Professor, Graham Rogers, M.D.; Hydro-Therapeutics—Professor Alfred Gardner, M.D.; Ophthalmology and Otology—Professor Geo. Ash Taylor, M.D.; Pediatrics—Associate Professor H. F. Senftner, M.D.; Clinical Instructor and Assistant, Wm. E. West, M.D.; Genito-Urinary Diseases—Chief of Clinic and Associate Professor C. Stern, M.D.; Dermatology—Chief of Clinic and Instructor L. D. Wilson, M.D.

Thanking you in anticipation for your publication of the above, I am, faithfully yours,

J. L. ADAMS, Secy.

Progress of Medical and Surgical Science.

Pott's Fracture.—Fibula fractured about three inches above the ankle and the tip of the malleolus internus splintered off.

These cases give great anxiety to the conscientious emergency surgeon. Great tendency to leave a weak joint with the mobility seriously impaired. Foot tends to be displaced outwards. All appliances have this in view.

With a strip of adhesive plaster started just below the sight of fracture of the fibula and carried under the instep then turning the sole of the foot slightly in and up, then attaching the adhesive an inch or so above the level of the seat of fracture in the fibula on to the anterior surface over the tibia meets the above requirement. Over this I put a cotton dressing. Then I lay down the Gigli saws, holding them where I want them with adhesive strips. I put one in front from just below the knee down to the toes. One behind from a corresponding place below the popliteal space to the heel, a third crossing this at the heel and going up the sole to the toes. Then I apply a plaster of Paris dressing, rather heavy.

When the plaster is nearly dry I cut out with my Gigli saws. This is the cast it makes. If convenient, I put a white stocking over the Gigli saws before applying the plaster of Paris. This makes a fine lining for your cast. Then I bind the edges of the cast with adhesive strips. Around the cast, while on the leg, I apply strips of adhesive to take the place of a dry roller to hold the halves together. In front I turn it back from the cut edge and punch a hole in it. To this hole I attach a piece of shoestring. The adhesive acts as a hinge behind, and I tie the strings in front. I am a firm believer in the early passive motion to save time and function where there has been injury around a joint.

The originator of this detachable plaster of Paris dressing was Dr. C. O. Bechtol, of Chicago. The addition of the adhesive strips I originated.

Classification of Tumors.—Some of our late authors, in classifying tumors as to their histogenesis, state that all tumors must originate

from one of the three blastodermic layers, viz.: epiblast, mesoblast or hypoblast, and that all of the epithelial tumors are either of epiblastic or hypoblastic origin, and that all of the tumors that are made up of connective tissue must necessarily come from the mesoblastic layer

A malignant tumor coming from either the epiblast or hypoblast we call a carcinoma, and a malignant tumor of connective tissue origin we denominate a sarcoma.

This arrangement is a little confusing when we make a close study of the embryological origin and relation of tissues.

The vagina and rectum are invaginations of the epithelial surface, and a tumor arising in these structures is of epiblastic origin; the genito-urinary tract, that is the bladder and urethra, are of hypoblastic origin, so carcinomas arising in these epithelial structures are classed as malignant tumors of hypoblastic origin, but we have been taught by some authors at least that all cancers were tumors of the malignant type, developing either in the epiblastic or hypoblastic layer of the blastoderm. Now, we recognize a malignant tumor of the epithelial type in the uterus and call it cancer, and when we trace the uterus back to its embryological origin we find that it is a structure developed from the Mullerian ducts, which are of mesoblastic origin, and its epithelial cells are primary mesothelial cells of mesoblastic origin. The kidneys and ureters come from the wolffian ducts, and their epithelial surface is a mesothelium of mesoblastic origin. So we must classify all malignant epithelial tumors as cancers, whether they are of epiblastic, hypoblastic or mesoblastic origin, and that we can have cancer developing in and from the mesoblast or so-called connective tissue, from which, for a long time, was thought that a sarcoma was the only malignant tumor that originated from the mesoblast. Now let us remember that cancer of the uterus, ureter and kidney is of mesoblastic origin.

Treatment of Shock.—Dr. Bacon Saunders, of Fort Worth, Texas, states in the April copy of the *Texas Medical Gazette*, that most of the remedies that have been generally supposed to be of benefit in the treatment of shock are absolutely worthless, and some of them positively harmful.

Medicinal agents of real power in relieving shock are yet to be discovered.

Whisky, digitalis, strychnine, nitro-glycerine and amyl nitrite not

only do not always do good in shock, but it is more than probable that some of them, and probably all of them, sometimes do positive harm. Their use may be like applying the whip to an exhausted horse. Pure shock is an exhaustion of nerve centers, and a few more lashes applied with strychnine might exhaust its small reserve energy.

Dr. Bacon Saunders claims that more can be done toward preventing shock than relieving the condition. Some of the most frequent causes of shock are rapid loss of blood, followed by rapid loss of heat; panic and fright are other causes.

So, in an injury, control hemorrhage, prevent heat radiation by applying dry heat, and control pain with morphine, a dry hot blanket being worth more than all the whisky and strychnine; that in shock little or nothing is absorbed by the stomach, and it is useless to drench the patient with whisky, and if absorbed might do harm; that shock is increased or precipitated by leaving the patient exposed on the ground, while some friend runs for a drink of whisky for him.

Dr. Bacon Saunders believes that it is time that both the public and doctors were taught to depend less on alcohol, and more on hot blankets in cases of injury and impending shock. If the loss of blood has been a factor either in producing or protracting shock, it should be met with the intra-venous use of normal saline solution.

Recent experiments show that a 1-50000 solution of adrenalin used intra-venously have more power to overcome a shock than any other known drug, saline alone seeming to be of little power to overcome shock not due to loss of blood. The attending physician should combat conditions that predispose shock, and then shock will be a less frequent complication of injuries, operations, etc.

Leucorrrychia a Sequela of Arsenic Poisoning.—Dr. Chas. Aldrich, of Cleveland, reports three cases of arsenic poisoning in which there developed a transverse white line on all of the nails of the fingers and toes.

One case consulted him presenting the following symptoms: Foot drop, loss of patella reflex, ataxic gait, desquamation, falling out of hair. Being closely questioned, the patient admitted that he had taken rough on rats. Very soon afterwards he was seized with cramps, burning sensation in epigastrium, vomiting, blood being in some of the vomitus. This patient presented well marked white lines extending across the nails.

Dr. Florence Sabine reports a similar case in the *John-Hopkins Bulletin*, May, 1901.

Dr. Astor has never seen a case. English writers report white ridges on the nails of beer drinkers, especially debauches, each ridge almost representing a debauch.

Arrest in development of the nail is noticed in many or all of the severe infectious diseases when vitality reaches a low ebb, but not the white line.

It is believed by Dr. Aldrich that the acute poisoning not only arrests the development of the nails temporarily but prevents the normal keratization from becoming physiologically complete. Now, if this is true, by excluding trauma, congenital anomalies, acute specific fevers, we can almost be positive that the patient presenting such nail changes has been the victim of arsenic poisoning, and by calculating the growth of the nail can ascertain about when the poisoning occurred.—*Texas Medical Gazette*, April, 1904.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
S. B. HAYS, M. D., Manager.

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

AUTOPSY, ITS IMPORTANCE FROM A MEDICO-LEGAL ASPECT.

The coroner and the doctor seem to differ in a given case in a Dublin Hospital. A man who had been complaining for some time, presenting cardinal symptoms of some heart involvement, died, and Dr. Booth, house surgeon in the Dublin City Hospital, refused to sign the death certificate on the grounds that he was not positive as to whether the condition was cardiac or not, and if cardiac of what character of involvement. He suggested an autopsy, but the coroner, who seems to not be a physician, took the case in hand, and without performing an autopsy rendered a statement of the cause of death as heart failure, and the coroner's jury returned a verdict of death from heart disease.

EDITORIAL NOTE.

It will be noted by the profession with much satisfaction that the county boards have been granted the same power as the State board to execute the sanitary regulations for each county in the State.

Book Reviews.

Self Cure of Consumption Without Medicine, with a Chapter on the Prevention of Consumption and Other Diseases, by Charles H. S. Davis, M.D., Ph.D., member of the Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children. E. B. Treat & Co., Publishers.

This is a most valuable addition to any physician's library. The articles on "Open Air Treatment for Consumption" and "Diet" are especially worth the attention of the profession, for on these lines we must expect our success in the treatment of this dreadful malady.

The chapter on "Prevention of Consumption" should not only be read by the profession, but by the laity, as there are many good points brought forth that are easy to be carried out.

The composition of the work is splendid. When you begin to read you find it so free and easy that you read it through, and only wish it was twice the size.

Diseases of Women, by Thomas A. Ashby, M.D., Professor of Diseases of in the University of Maryland; 660 pages, with 233 Illustrations. Baltimore: Williams & Williams Company, Publishers, 1903.

In this work the author has laid stress on the subject of physical diagnosis, and has gone into detail in describing the various methods of examinations of the pelvic organs, which makes the book of interest to the reader, whether a practitioner or a surgeon.

The author also makes a plea for the medical treatment of more cases, and calls attention to the fact that the functional troubles will often disappear under carefully selected remedies, thereby making an operation unnecessary.

Anatomy, A Manual for Students and Practitioners, by Henry E. Hale, A.M., M.D., belonging to the Medical Epitome Series, edited by V. C. Pedersen, A.M., M.D. Philadelphia and New York: Lea Bros. & Co., 1903.

The above belongs to the well known Medical Epitome Series, and can aptly demand our recommendation as one of the few leaders in its class. The chapters on the nervous and circulating systems are especially well written, and, although brief, may not be quoted as brevity at the expense of thoroughness and text. Some few manuals, epitomes, etc., may be recommended to students without sacrificing the quality or the text, and Hale's "Anatomy" is one of them in our eyes, and its binding and print are excellent.

Society Proceedings.

THE MULDRAUGH HILL MEDICAL SOCIETY.

The Muldrough Hill Medical Society met at Elizabethtown on April 14th, with a large attendance of doctors present from the several counties.

After the regular business had been gone over the several papers were read.

Dr. James Bullitt read a paper on "Undecented Testicle," and Dr. Fred. L. Koontz read one on "Medical Gynecology: What It Offers," and following came the symposium on diphtheria. All the papers received a good discussion, which follows.

In the discussion of Dr. Bullitt's paper Dr. McChord said: There is little for me to say. They seldom give trouble only when they are situated in the canal, and unless the patient suffers from pressure symptoms, or from the mental conditions brought on by his brooding over the condition, such as we see in women with torn perineums, they are better left alone; for in our efforts to replace it, the trouble is in the cord, and we are unable to keep the testicle down after we have operated, and where the testicle is in the abdominal cavity and has to be operated on for the relief of mental symptoms, etc., that if it is small that it best be removed.

Dr. Boggess: Surgery is out of my line, but in children's clinics we see testicles retained at the outer ring and above the bone. Most will descend if you will take the trouble to fit a dressing on the child that will exert pressure above the testicle so that it will be dragged down into place, as it were, I think much can be done in the case.

Dr. Koontz: It is by the study of pathology that we are able to understand these cases, and as a possible complication we must bear in mind a hernia, which is important; for the child will have to wear a truss and be submitted to the dangers thereof which is no little thing.

Dr. Gardner, in the discussion of Dr. Koontz' paper on "Medical Gynecology and What It Offers," said: While I believe in the practitioner in gynecology, I think there are few cases where medicine can do more than palliate, and that sooner or later these cases have to undergo some form of radical treatment.

Dr. Bullitt: In all cases of obstetrics and minor gynecology that

the hands should be absolutely clean, thereby preventing infection, and that the so-called tinkering with cases was a mistake and should not be done ; that where a pathological condition existed that it should be dealt with in a surgical way.

Dr. Aud : While I am thinking of the underclothing that girls wear as being a cause for diseases, I think also of the class that comes to the office, and they are not young girls, but married women, and for this reason I am not inclined to put so much stress on the kind of clothing worn, but believe that female diseases are more often due to abortions that are brought on by women themselves and by a certain class of doctors who are mean enough to do this kind of work.

Dr. McChord : There are two parties to an abortion, the woman and the doctor, and in his opinion any doctor that would do an abortion for a woman would steal or murder for money, for he was really murdering for money when he did the abortion. He said the practitioner should do his full duty at the bedside in the repair of all tears, etc., immediately at the time if the case would permit, or as soon after as possible, and in this way prevent many conditions that such women afterwards suffer from.

Dr. Bruner : I think that if all women were examined ocularly at the time of labor there would be less surgical gynecology.

Dr. Koontz, in closing : I think the reason that we do not see virgins in our office is that they themselves are too timid to come, and that where they sum up courage enough to tell the mother that the mother has a timidity about asking the doctor in regard to the girl's condition, and for this reason the girl goes on until she marries and is taken to the doctor by the husband.

Dr. Strickler, in the discussion of the symposium : We are all agreed as to the cause being a bacillus, but why they come, whether atmospheric changes are the cause, or is it due to being carried in some other way. I believe I have seen it due to water supply, and as to the time when most prevalent that it had been my experience that November and December furnished the most cases. He reported an instance where three families had lost all their children by living in the same house ; that is, the second family moved in after the first family had lost their children and moved out of the house, and the house had been vacant for a year. This was also true in the case of the third family. This I believe to be a case of infection from the house.

Dr. Strother : In regard to complications, I wish to report a case

that occurred in my own practice where the disease was in a man, and after the trouble had somewhat subsided he developed epistaxis, which could only be controlled by plugging.

Dr. Howell: One of the most common complications is bronchopneumonia, while thrombosis and embolism are some of the possible things that may follow in the wake of diphtheria.

Dr. Cheatham—I would class membranous croup as diphtheria and treat it as such. I don't like the alkali as a treatment, or rather a cleansing agent for the throat, for the reason that the bacillus grow best in an alkali medium, but would favor the use of some form of acid or peroxide of hydrogen, which is slightly acid, boric acid, etc.

I think all you need in true cases is antitoxin, and to use it freely. I used 67,000 units in one case at the Masonic Home during the attack, there being practically no limitation to the amount to use. By the use of the serum you lessen the severity of the attack, and very much lessen the complications that would otherwise follow. The conditions of the eye due to diphtheria are seldom seen, and are usually amenable to treatment when seen.

Dr. Gaddie: Before antitoxin days I had good results from the bitter wine of iron, and believe in severe cases that it does good yet in conjunction with other treatment.

Dr. Bruner: I think that the mixed cases of infection should be treated by a mixed serum.

**Sixtieth Annual Meeting of the American Psychological Association at
St. Louis. May 30th, 31st, June 1st, 2d, 3d, 1904, Planters' Hotel.**

MONDAY, MAY THE THIRTIETH, TEN A. M.

Call to order.

Addresses of welcome by His Excellency, A. M. Dockery, Governor of Missouri; Hon. Rolla Wells, Mayor of the city of St. Louis; Dr. Wm. G. Moore, President of the State Medical Association.

Responses.

Report from the Committee of Arrangements.

Report of Council.

Report of Treasurer.

Report of the Editors of the American Journal of Insanity.

Appointment of Nominating Committee.

Recess for Registration of Members.

Presidential Address.

TUESDAY, MAY THE THIRTY-FIRST, TEN A. M.

Report of Council.
 Election of Members.
 Unfinished Business.
 Report of Nominating Committee.
 Election of Officers.
 Report of Auditors.
 Annual Address,
 Charles G. Chaddock, M.D., St. Louis, Mo.

PAPERS.

- "Some of the Medico-Legal Relations of Paranoia."
 Chas. K. Mills, M.D., Philadelphia, Pa.
 "A Medico-Legal Case of Well Poisoning—With a Plea for a Hospital Observation Law."
 Henry R. Stedman, M.D., Brookline, Mass.
 "A Border Line Case."
 C. Eugene Riggs, M.D., St. Paul, Minn.
 "The Relative Importance of Predisposing and So-Called Exciting Causes in the Etiology of Mental Disease."
 Carlos P. MacDonald, M.D., New York, N. Y.

WEDNESDAY, JUNE THE FIRST, TEN A. M.

Report of Council.
 Election of Members.
 Unfinished Business,

PAPERS.

- "A Case of Sleep Talking."
 R. D. Burrell, M.D., Canandaigua, N. Y.
 "The Epileptic Child : Its Treatment and Care."
 W. P. Spratling, M.D., Sonyea, N. Y.
 "The Need for Careful and Exhaustive Scientific Study of Mental Epilepsy."
 Dwight S. Moore, M.D., Jamestown, N. Da.
 "The Mental Conditions Occurring in Cretinism."
 Edward E. Mayer, M.D., Pittsburg, Pa.
 "Organic Dementia, with Abstract of Fifty-eight Cases."
 J. M. Keniston, M.D., Middletown, Conn.
 "Intra-Cranial Tumors in the Insane, with a Report of Two Cases."
 I. H. Neff, M.D., Pontiac, Mich.
 "A Remarkable Case of Degenerative Insanity of the Moral Type."
 Henry R. Stedman, M.D., Brookline, Mass.
 "A Case of Hysteria with Unusual Symptom Complex." Loss of Identity, Reversed Writing, Homosexuality, Migraine and Sytematized Delusions.
 Richard Dewey, M.D., Wauwatosa, Wis.

THURSDAY, JUNE THE SECOND, TEN A. M.

Report of the Council on Time and Place of Next Meeting.

PAPERS.

- "The Mental Results of Abdomino-Pelvic Operations in Insane Women."
 W. P. Manton, M.D., Detroit, Mich.
 "Reconciliation of the Disparity between Hospital and Asylum Trained Nurses."
 C. P. Bancroft, M.D., Concord, N. H.

"A Consideration of the General Conditions Associated with Insanity and Their Connotation, Statistically and Otherwise."

H. A. Tomlinson, M.D., St. Peter, Minn.

"Are the Insane Responsible for Criminal Acts?"

John Panton, M.D., Kansas City, Mo.

"A Review of the Recoveries of the St. Lawrence State Hospital in the Year 1894."

R. H. Hutchings, M.D., Ogdensburg, N. Y.

"A Few Remarks About Observation Hospitals and Wards."

E. Stanley Abbot, M.D., Waverley, Mass.

"The German Psychiatric Clinics."

E. N. Brush, M.D., Towson, Md.

"Extension of Tent Treatment to Additional Classes of the Insane."

C. Floyd Haviland, M.D., and Chester Lee Carlisle M.D., Ward's Island, N. Y.

"A Plea for the Voluntary Admission of Certain Types of Insanity in Institutions for the Insane."

James Russell, M.D., Hamilton, Ont.

MEMORIAL HALL, NINETEENTH AND LOCUST STREETS, EIGHT P. M.

Members are invited to join with the physicians of St. Louis in a meeting called to commemorate the life and work of the late Dr. E. C. Runge, formerly Superintendent of the St. Louis City Insane Asylum.

FRIDAY, JUNE THE THIRD, TEN A. M.

PAPERS.

"The Variations of the Psychic Equivalent."

F. Savary Pearce, MD., Philadelphia, Pa.

"Suicide and Insanity."

Gershom H. Hill, M.D., Des Moines, Ia.

"Tubercular Meningitis in the Adult."

Frank P. Norbury, M.D., Jacksonville, Ill.

"Notes on Hallucinations."

William A. White, M.D., Washington, D. C.

"Review Some of of the Recent Blood Stains, with Demonstrations."

George C. Crandall, M.D., St. Louis, Mo.

"The Alcoholic Psychoses."

Henry P. Frost, M.D., Buffalo, N. Y.

"Amnesia Clinically and Diagnostically Considered."

Charles H. Hughes, M.D., St. Louis, Mo.

"Characteristics of the Scotch Lunacy System."

Owen Copp, M.D., Boston, Mass.

"Case of Malingery."

Charles G. Wagner, Binghamton, N. Y.

MEMORIAL NOTICES.

Geo. W. Foster, M.D.

By I. W. Blackburn, M.D.

A. B. Richardson, M.D.

By Henry A. Tobey, M.D.

Orpheus Everts, M.D.

By F. W. Langdon, M.D.

John B. Murphy, M.D.

By R. W. Bruce Smith, M.D.

Edward C. Runge, M.D.

By Frank R. Fry, M.D.

Introduction of the President-Elect.
Adjournment.

Notices.

AMERICAN ACADEMY OF MEDICINE.

The Twenty-ninth Annual Meeting of the American Academy of Medicine will be held at the Shelburne, Atlantic City, beginning on Saturday, June 4, at 11 A. M., and continuing through Monday, the 6th.

The program includes :

I. The report of the Council on the recommendation of a paper read at the last meeting by Dr. H. Bert Ellis, of California, on "The Necessity for a National Bureau of Medicine and Foods."

II. The report of the committee to investigate the teaching of Hygiene in our public schools.

In order that this report may be discussed intelligently, the committee will publish the laws relating to the teaching of hygiene now in force in the United States, in the Bulletin of the American Academy of Medicine, to be published in April, 1904. It is believed that this is the most complete and accurate compilation of these laws published, and the only compilation issued in an easily accessible and low priced publication. (Any number of the Bulletin will be sent to any address upon receipt of 50 cents.)

III. The reports on the results of the examinations before the various State Boards of Medical Examiners of 1903.

IV. A Symposium on the Relation of Physicians to Dentists and Pharmacists. Several papers of value are promised for this Symposium, and the subsequent general discussion will be helpful.

V. A Symposium on: "Are Modern School Methods in Keeping with Physiologic Knowledge?" There is probably no subject of general interest that should be directed by the medical profession of more importance than this. Apart from the papers promised, arrangements are being made for a discussion opening up the whole subject from various points of view.

VI. In addition to the above, there will be several papers upon independent topics, affording a variety to the program.

Dr. John B. Roberts, of Philadelphia, has selected "The Doctor's Duty to the State" as the title of his address as President. This address will be delivered on Saturday evening, and the Social Session will be held on Monday evening. The usual charge of two dollars a person will be asked of those who attend this function. Ladies as well as gentlemen are welcomed.

The management of the Shelburne offers reduced rates for all rooms to those who attend this meeting. The minimum rate is three dollars a day, whether one or two in a room. This does not mean that every room without a bath is offered at three dollars a day. Hence, as the prices of the rooms vary greatly, it is desirable for those planning to come to correspond with the management, and arrange in advance the room and the price.

It is too soon to announce anything about transportation rates. Those who desire to be kept informed about these and to receive subsequent notices of the meeting are requested to so advise the Secretary.

Membership in the Academy is open to the reputable physicians who are also graduates of a recognized college or science school. Application blanks will be sent upon application.

The transactions of the meeting will appear in the Bulletin of the American Academy of Medicine, a bi-monthly journal published by the Academy at an annual subscription of three dollars, which may be sent to the Secretary.

Very truly yours,
CHARLES MCINTIRE.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended April 28, 1904:

Pettus, W. J., Assistant Surgeon General—Granted leave of absence for seven days from April 26. April 25, 1904.

Cobb, J. O., Surgeon—Granted leave of absence for four months from May 1, 1904. April 25, 1904.

Wertenbaker, C. B.—To proceed to Toomey, Waterall, Logansport and Greenwood, La., for special temporary duty. April 2, 1904.

Rosenau, M. J., Passed Assistant Surgeon. One day's leave of absence, April 28, 1904, under paragraph 189 of the regulations.

Anderson, J. F., Passed Assistant Surgeon—Granted leave of absence on account of sickness for seventeen days from April 5. April 28, 1904.

Berry, T. D., Assistant Surgeon—Granted leave of absence for three days from April 22, 1904, under paragraph 191 of the regulations.

Junt, Reid, Pharmacologist—To proceed to New York, N. Y., for special temporary duty. April 20, 1904.

Alexander, E., Acting Assistant Surgeon—Granted leave of absence for ten days from May 1. April 26, 1904.

Bailey, C. W., Acting Assistant Surgeon—Department letter granting Assistant Surgeon Bailey leave of absence for eleven days from April 22, 1904, amended to read eleven days from April 24. April 22, 1904.

Ballard, J. C., Acting Assistant Surgeon. Granted leave of absence for ten days from May 5. April 21, 1904.

Goldsborough, B. W., Acting Assistant Surgeon—Granted leave of absence for three days from April 27. April 25, 1904.

Rodman, S. C., Acting Assistant Surgeon—Bureau letter granting Acting Assistant Surgeon Rodman leave of absence for six days from April 12, amended to read one day from April 13. April 23, 1904.

Rodman, J. C., Acting Assistant Surgeon—Granted leave of absence for five days from April 26. April 25, 1904.

Watters, M., Pharmacist—Granted leave of absence for five days from May 3. April 23, 1904.

PROMOTIONS.

Assistant Surgeon T. F. Richards commissioned as Passed Assistant Surgeon to rank as such from March 11. April 21, 1904.

Assistant Surgeon W. W. King commissioned as Passed Assistant Surgeon to rank as such from March 13. April 21, 1904.

BOARD CONVENED.

Board convened to meet at Stapleton, N. Y., April 23, 1904, for the examination of an officer of the Revenue Cutter Service. Detail for the Board: Surgeon Preston H. Bailhache, Chairman; Passed Assistant Surgeon A. C. Smith, Recorder.

Board convened to meet at Washington, D. C., April 25, 1904, for the physical examination of an applicant for admission into the Revenue Cutter Service. Detail for the Board: Assistant Surgeon General L. L. Williams, Chairman; Assistant Surgeon General W. J. Pettus, Recorder.

Board convened to meet at San Francisco, Cal., May 9, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon W. G. Stimpson, Chairman; Assistant Surgeon Carl Remus, Recorder.

PATENTS GRANTED APRIL 5, 1904.

- 756,213. "Surgical Knife," Smith A. Connell, Sr., East Las Vegas, New Mexico.
 756,252. "Vaginal Syringe," Wm. S. Locke, Cincinnati, Ohio.
 756,354. "Inhaler," Sydney O. Goldau, New York, N. Y.
 756,441. "Massage Apparatus," Arthur Ward, Philadelphia, Pa.
 756,544. "Surgical Obstetrical Sheet," Wm. W. Townsend, Rutland, Vt.
 756,546. "Combined Hychrometer and Syringe," Robt. Van Benthuyssen, Newark, N. J.

APRIL 12, 1904.

- 757,013. "Anesthetic Vapor Inhaler," Geo. L. Bennett, Chicago, Ill.
 757,140. "Hip Adjuster," Edward B. Leffeler, Aberdeen, S. D.
 757,177. "Pneumatic Massage Apparatus," Frederick H. Crabtree, Anaconda, Mont.
 757,287. "Artificial Leg," Lee Duggan, Rocky Mount, N. C.

Necrology.

DEATH OF A WELL KNOWN PHYSICIAN.

Dr. D. C. Phillips died last Friday at the home of his son, Mr. James Phillips, near White Mills, of paralysis of the brain, after an illness of nineteen months. Dr. Phillips was one of the best known men in Hardin, Hart and Grayson counties, where for many years he was a practicing physician, his practice extending into the three counties. He was eighty years old last July, and up to his fatal illness was the most remarkably preserved man in all our acquaintance. For fifty years he practiced medicine, his home being in Hardin county, near Millerstown. He enjoyed a large practice, extending in many directions for twenty miles. At seventy-eight years of age he would frequently ride twenty-five miles in one day, and promptly answered calls at any time of night regardless of the weather. He was truly the beloved physician in the large territory in which he practiced, and the poor who could never pay him received as much attention as the rich. He was a forceful man mentally, with great will power and determination, and a keen, incisive mind. In his death Hardin county lost an upright, honorable citizen, the community in which he lived a useful and a helpful man, and hundreds of people a loyal and trusted friend. At his home he dispensed old-fashioned Kentucky hospitality, and nothing pleased him more than to have his friends drop in upon him. The gentler side of his nature was shown in his devotion to his loved ones, and in his great solicitude and sympathy for the sick. He leaves five children, Hardin Phillips and Mrs. George Carden, of Missouri; James Phillips, Mrs. Dr. Owsley and Miss Lettie Phillips. The burial took place Saturday at the family burying ground on the home place.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

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LOUISVILLE, KY., MAY 15, 1904.

No. 148.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. — RUSKIN.

Original Articles.

GALL STONES.*

BY J. GARLAND SHERRILL, M.D.

This trouble occurs with such frequency, is so often overlooked, so often causes acute suffering, and in so many cases becomes a menace to life, that I am constrained to present it for your consideration. The question is forced upon us: Why are so many of these cases not recognized, and the sufferers not relieved? I think the answer lies in the fact that we have been taught to consider jaundice, severe attacks of colic, and the passage of a stone in the feces as necessary to a diagnosis, when they are often not prominent features at all. Jaundice is absent in perhaps three-fourths of the cases, and may not be present even in cases of common duct stone, or may be so slight as to escape notice. Colic is present in varying degree, perhaps in 50 per cent. of cases, and when present is a valuable sign, but its absence does not make a negative proof. Only a small proportion of cases show the passage of stones in the stool. The reason for this lies in the fact that small stones pass through the ducts without causing much disturbance, while larger ones, being unable to enter the bowel except by ulceration, can only exceptionally pass. That this passage by ulceration does occur has been abundantly proven in cases dying from intestinal obstruction, where bimucons fistulæ were found connecting the colon or duodenum with the gall bladder. Another reason for the

* Read before the West End Medical Society.

failure to recognize gall stones lies in the old teaching with reference to gastralgia. I believe with Kehr that the majority of pains which are called cramps of the stomach are gall stone colics. Therefore, any pains in the upper abdomen for which no other explanation is apparent should excite a suspicion of gall stones.

The causes actively participating in the formation of gall stones are :

1. Conditions causing a change in the consistency of the bile, such as overfeeding, the use of intoxicants, etc., which cause disturbance of the liver function and render the bile more viscid.

2. Conditions which tend to interfere with the flow of bile from the gall bladder, as dependency of that organ from tight lacing (the majority of cases occur in women), from enteroptosis with displacement of the liver, or from adhesions to adjacent organs from inflammation due to other causes, as appendicitis, gastric or duodenal ulcer, and catarrhal inflammation of the intestine and ducts, which is also a factor, both owing to the obstruction to the flow and to the infection it carries.

3. Infection, without which stone formation rarely occurs. The most frequent infection is that of the colon bacillus, which accounts somewhat for the frequency with which appendicitis is co-existent. The staphylococcus and streptococcus are sometimes found, as is the typhoid bacillus. The latter organism has been found in these cases years after the febrile attack. Mayo, however, thinks the importance of the typhoid bacillus as a causative agent has been overestimated, while Ochsner lays great stress upon the history of typhoid fever. It has been proven by Charcot, Chiasi, Gambault and others that in animals simple infection of the gall bladder gave no pathological condition if no obstruction to the biliary flow was present. (Ochsner, *Annals of Surgery*, Vol. 35, page 708.) Thus we may conclude that at least two of these factors are necessary for stone formation, and in many cases all three are present. I consider constipation an important factor, as it favors germ growth in the intestine, tends to favor duodenal catarrh, causes toxic products to reach the liver, and is often found in those who live well and lead sedentary lives. Murphy (discussing Ochsner's paper, *Annals of Surgery*, Vol. 35) says, that he believes gall stones are formed by the production of cholesterol from degeneration of the epithelial cells of the gall bladder as a result of infection. This is somewhat in accord with the investigations of Naunyn, who has

shown that cholesterin and lime salts are largely produced by the mucous membrane of the gall bladder, especially when a catarrhal inflammation is present.

The changes occurring in this condition vary greatly in different cases. One or more attacks of catarrhal inflammation (so-called biliousness) of the duodenum and bile ducts occur before trouble occurs in the gall bladder. A catarrhal or perhaps a suppurative cholecystitis develops, following which a marked outpouring of viscid mucus occurs, the epithelium of the gall bladder is exfoliated, and the precipitation of a combination of albumen and bilirubin occurs, thus forming a nucleus for stone formation. Cholesterin and lime salts are deposited upon this, and the accretion continues to increase in size until by pressure sufficient irritation is caused to excite efforts at expulsion. These stones may pass through the duct when small or when large after ulceration has opened a passage into the alimentary canal. This was formerly considered of very rare occurrence, but it is now thought to take place with some degree of frequency. Similar adhesions may form between the fundus and the abdominal wall, resulting in an abscess, into which cavity the stones may escape. In other cases the stones lie in a gall bladder considerably distended, while a large stone obstructs the cystic duct. In still others a number of sacculations are formed, each containing one or more stones, while the gall bladder is contracted and contains no bile. In a considerable proportion of cases stones are found in the common duct, where they may remain fixed, partially or completely occluding the duct, or where only one stone is present it may float up and down, having a ball valve action. Mayo records thirty-one cases of common duct stone in 328 gall bladder cases. (*Annals of Surgery*, Vol. 35.) Ulceration may allow a common duct stone to pass into the duodenum near the papilla of Vater, but this is of rare occurrence. As a result of prolonged obstruction of the common duct, stones may form in the liver, and degeneration of the liver cells may take place. Under such circumstances, the kidneys are overtaxed by the effort to eliminate the liver products, and sooner or later undergo organic change. The functional activity of the kidney is an important factor in determining the longevity of these cases of persistent jaundice. Prolonged obstruction at the intestinal orifice of the common duct is likely to excite a chronic or an acute pancreatitis. The inflammatory changes in the gall bladder and ducts and the constant irritation from the pressure of stones are important factors in the development of malignant disease of these structures. In almost

all cases of primary cancer of the gall bladder or ducts the presence of gall stones has been noted.

Acute inflammation of the gall bladder and even gangrenous cholecystitis may occur at any time with gall stones, and add much to the gravity of the case.

SYMPTOMS.—One of the most important symptoms is pain, which may be simply an uneasiness, or may assume the type of a biliary colic, recurring at intervals, very sharp, beginning suddenly after a meal, or without regard to eating. It lasts a variable length of time, and may cease suddenly or subside gradually, but nearly always leaves the part tender for some days. Profuse sweating is noted during an attack, and vomiting may be present. Jaundice may be present, but is oftener absent. The upper abdomen is often distended and tender to pressure, especially over cartilage of ninth rib and radiating toward umbilicus and toward back, even when no acute attacks have occurred. More or less rigidity of the abdomen accompanies this condition. These patients complain of attacks of indigestion, with distensions from gas and eructations. In some cases a swelling or fullness can be made out below the rib margin, and if the gall bladder is large the tumor may extend almost to iliac spine. It is ovoid or pear-shaped, and smooth. In old cases, especially those with jaundice, the liver dullness may be increased, but is often masked by the tympany of a distended colon. A history of a previous attack of typhoid fever or appendicitis may be elicited, and sometimes a history of the latter may lead us astray. It is well to remember that appendicitis and gall stones are often present in the same patient. The urine should always be examined for bile. The passage of a gall stone in the stool is proof positive. The temperature is usually normal, but when attacks of cholangitis occur fever is present. Symptoms of sepsis will indicate the presence of a suppurative or gangrenous gall bladder, and distension of the abdomen will follow the local or general peritonitis. Rupture of the gall bladder may occur from over distension, and will give the symptoms of shock, followed by those of peritonitis, as the contents of an inflamed gall bladder are always toxic.

The diagnosis is then to be made by intermittent attack of pain, accompanied by vomiting or gaseous eructations, followed by soreness in the upper abdomen, rigidity and tenderness; the latter most pronounced over a line from ninth or tenth rib to umbilicus; tumor, if present, is a valuable aid, as is jaundice, but the diagnosis should be made without either of these symptoms.

PROGNOSIS.—The immediate danger to life is, as a rule, not great, although death may occur very promptly in an acute cholecystitis or from peritonitis following rupture. There is small probability of a cure being effected by nature, even when ably assisted by the best directed medical treatment, and sooner or later these patients must seek surgical aid. The prognosis after surgical intervention is much better when the diagnosis is made, and the operation performed before the case becomes complicated and difficult. I do not mean to claim that no cases of gall stones are relieved without surgery, but that such relief is the exception. Complications and sequelae are many and varied. Twenty-eight different conditions are given by Mayo and Robson, the following being among the most important :

1. Chronic invalidism.
2. Stricture of the cystic or common duct.
3. Suppurative cholangitis and cholecystitis.
4. Phlegmonous cholecystitis and gangrene of the gall bladder.
5. Septicemia or pyemia.
6. Ulceration of gall bladder, with the formation of fistula, either bimuscular into intestine, pelvis of the kidney or urinary bladder, or through the abdominal wall.
7. Abscess of the peritoneum, abdominal wall, liver, perireal or sub-diaphragmatic space or empyema of the pleural cavity.
8. Peritonitis, either local with adhesions, or general from rupture or perforation.
9. Ileus from atony with great distension and perhaps due to great pain.
10. Acute intestinal obstruction from (*a*) local peritonitis and paralysis of the gut; (*b*) volvulus; (*c*) stricture by bands produced by gall stones; (*d*) impaction of a large gall stone.
11. Cancer of gall bladder or ducts.
12. Acute or chronic pancreatitis.
13. Hemorrhages from prolonged jaundices.
14. Cirrhosis of the liver.
15. Pneumonia of right lung.

TREATMENT.—Treatment may be classified as medical and surgical, each of which has its special indications, and while I believe this to be a surgical disease, I do not belong to that radical school which teaches that every case of gall stones should be at once subjected to surgical operation. Many cases have little inconvenience, and the sole danger in these cases is, perhaps, the remote one of malignancy, which is

certainly insufficient to demand operation when the patient leads a comfortable existence. On the other hand, a larger number of cases suffer very greatly, and this class of patients should be offered surgical relief. It is the duty of the physician to state the case clearly to the patient, and allow him to make the decision with reference to surgery. When the symptoms become more pronounced the attendant should lean strongly to the surgical side, and not delay until some of the many complications develop which always add to the gravity of operative steps. And we should ever bear in mind that an early and uncomplicated gall stone operation is almost as free from risk as any surgical procedure, and should make this plain to the patient.

The medical treatment consists in efforts to keep the biliary passages open, and to prevent their engorgement by attacks of catarrhal cholangitis. This may be accomplished best by the ingestion of large quantities of water, preferably hot, taken upon an empty stomach. The hot water readily cleanses the alimentary canal of its mucus and favors the secretion of its digestive fluids in proper quantity, and also tends to increase the fluidity of the bile. Upon the heat of the water and the quantity taken, aided by the saline ingredients which clean out the alimentary canal, depend the Carlsbad and other cures. Therefore, it is good practice to use the alkaline salts, such as the phosphate of sodium, which can be given before breakfast, in hot water, in doses of ʒi or ii . The patient should eat sparingly, avoiding sugars or starches, and should take regular exercise, carefully directed, and not to the point of fatigue. In connection with the above measures olive oil may be given either with the food or in some pleasant menstruum. When large quantities of olive oil are taken small masses may be passed which could readily be mistaken for gall stones. For the oil may be substituted ether and turpentine, according to Durand's method, with a view to dissolving the stones. That this has as yet been successfully accomplished in the living body we have no proof. It is safe, therefore, to say that the benefit derived from treatment lies in keeping the alimentary canal in good condition, and preventing catarrhal duodenitis and cholangitis. For the annoying symptoms of which the patient complains, as colic, abdominal distension, etc., rest in bed, with hot applications and turpentine stupes will be of great service. Ochsner recommends very highly the use of gastric lavage, claiming that spasmodic contractions of the gall bladder occur when the stomach is in motion and cease as soon as the stomach becomes quiescent. He has known this to relieve gall stone colic when one-

half to three-fourths of a grain of morphia had failed. I have noted the same result, but had ascribed it to the removal of gaseous distension. For the colic morphia may be demanded, or even chloroform inhalations may be necessary to obtain temporary relief. Lavage of the stomach and colon should be tried. Following an attack of severe pain only small quantities of concentrated food should be given, preferably some of the prepared foods. It is generally considered safer to treat the acute cases of gall bladder inflammation and acute localized peritonitis expectantly and operate later rather than to risk peritoneal infection by an operation during the height of the process. Where a rupture of the gall bladder has occurred, followed by an acute general peritonitis, prompt interference offers the only hope. I feel sure that I saved the life of the only case of rupture that has come under my care by this procedure. When the medical treatment fails to prevent frequent recurrence of the troublesome symptoms or where the severity of the symptoms is increasing surgery is indicated.

This must be varied according to the conditions met in each case. In the early work upon the gall bladder cholecystostomy with suture of the opening after the stones were removed was considered the ideal procedure, as the stone was believed to be the sole cause of trouble. It was soon found that the results after this operation (cholecystendysis) were not so good as after cholecystostomy with a biliary fistula. A reason for this was found in drainage, the infection of the gall bladder subsiding before the fistula closed, while in the former operation an infected bladder was closed, and soon inflammation or new stone formation caused a recurrence of the symptoms. Surgically, cholecystostomy is not an ideal operation, as a fistulous tract is less to be desired by many patients than the discomfort of gall stones. Therefore surgery endeavored to devise a better method for the relief of these patients, so complete extirpation was advised. This proved to be the best method for certain cases, but is dangerous where infection of the ducts is present with jaundice, as the good effects of drainage are lost.

To overcome this danger Mayo has proposed an operation in which the mucous membrane is removed, while the peritoneum and muscularis are left except at the fundus, thus leaving a channel for drainage, with slight chance for general peritoneal infection.

These operations left some cases still that required a different treatment, among which were those cases of obstruction to the common duct, due to cicatricial or malignant constriction of the common duct near its intestinal extremity, with a functioning gall bladder. To

meet this indication cholecystenterostomy has been found to be the most satisfactory method.

We may safely conclude that the indications for the different operations are as follows :

Cholecystendysis—Only when mistake in diagnosis, and perhaps cholecystostomy is better then.

Cholecystostomy—When the gall bladder is functioning, where there is no ulceration of the mucous membrane to result in stricture, and the potency of the common duct is not clearly established. Also in acute cholecystitis to relieve toxemia by drainage. When extirpation would likely result fatally, the complete operation to be done later.

Cholecystectomy—When the gall bladder is not functioning, and the common duct is patulous, as when in the absence of jaundice a stone is impacted in the cystic duct, so that a stricture will likely result; also when the gall bladder is closely contracted upon the stones; also when a cholecystostomy has been done for infection, or where it has failed to relieve the symptoms; also in acute septic cholecystitis without jaundice, and in gangrene of the gall bladder.

Mayo's operation is indicated when it is desirable to get rid of an infected mucous lining, and leave a channel for temporary drainage.

Cholecystenterostomy—To divert the bile around an obstruction.

HERNIA—REPORT OF CASES.*

BY DR. IRVIN ABELL, M.D.

Hernia, one of the most important surgical conditions with which we have to deal, is rather frequently encountered, and the following cases, recently operated upon, have been selected for your consideration, inasmuch as each one presents some particular point of interest.

The first case is one of a young man seventeen years of age, referred by Dr. Theiss. The condition presented was that of a congenital hernia, with the testicle occupying a position in the inguinal canal, the hernial sac reaching as far as the external ring; the testicle was quite small, and either undeveloped or else had atrophied as a result of pressure due to its position between the muscular layers of the abdominal wall. In its exposed position it was a source of annoyance and pain to the patient, and at his age it is practically impossible to replace it, consequently the testicle and sac were removed together, and

*Read at Louisville Clinical Society May 3, 1904.

the wound completely closed. The patient, after the lapse of several weeks, was able to resume his studies. A very interesting feature in this case, aside from the above, was the effect of the anesthetic on the circulation; chloroform was administered, and by an experienced anesthetist; disease of heart, lungs and kidneys were excluded by critical examination previous to its administration; operation consumed about twenty-five minutes, and towards the close it was noted that the pulse was becoming faster; this continued until it had reached 160, weak, with greatly lowered tension; heart stimulants were administered freely; it was, however, several hours before the pulse had resumed its normal rate. I have had several similar experiences with chloroform, consequently my respect for it is unlimited.

The second case is that of Mrs. M. H., a chambermaid, thirty-seven years of age. She came to my office wearing a most peculiar contrivance which she dignified with the name of truss, applied to an inguinal hernia of the left side; she had also noted an enlargement on the right side, which, upon investigation, proved to be a femoral variety, both having existed three and a half or four years. She was sent to the infirmary, and both hernias repaired at one sitting, closing the abdominal wall completely on the left side, and following the method of Bassini in dealing with the femoral. After being up and around she complained of the left side not feeling exactly right. Upon examination nothing was found to explain this; she had attributed it to a recurrence of the inguinal hernia, but this did not occur. After going to her home she still complained of the left side, and upon closer examination I discovered a femoral hernia on this side, the sac being very small, and containing intestine only when the intra-abdominal pressure was increased. She was returned to the infirmary and this hernia repaired, making, all told, three hernias in the same person—two femoral and an inguinal. This is the first time that I have met with such a number in one individual, and the small size of the left femoral hernia, with the co-existence of a large inguinal hernia of the same side, is rather unusual. In fact, the femoral was so completely overshadowed by the inguinal hernia that the former failed to attract the attention of the patient, and was overlooked by me in making the first examination.

Case three was a hernia into the umbilical cord, seen with Drs. Prather and Gossett. The umbilical cord was as large as my wrist for a distance of eight inches from the abdomen, the cavity into which the hernia occurred being three or three and one-half inches in length. The cord and sac were ruptured during delivery, and the intestines

were extruded through the opening, practically the entire bowel from stomach to sigmoid flexure lying upon the abdomen; the little patient was in profound shock, extremities cold and cyanotic, respiration shallow. In order to effect replacement it was necessary to enlarge the ring, this being smaller than the cavity, with the intestine adherent to the latter. After effecting replacement the vessels of cord were tied within the abdomen, the cord and contiguous portion of abdominal wall were cut away, and the latter closed with through and through sutures. During the time of the operation hot applications were continually made to the entire surface of the child's body. From the time of its birth to time of operation it lay wrapped in blankets, about one and one-half hours. It lived but a short time after operation, dying of shock.

Instances where Wharton's jelly replaces the abdominal wall to some extent are not so rare as the above condition.

Case four was a strangulated femoral hernia in a man seventy-four years of age, referred by Dr. C. W. Kelly. This patient walked into Dr. Kelly's office on the 11th of this month, stating that he had suffered for ten days with pains in the abdomen, and that twenty-four hours previous a lump had appeared in right groin, after which the pains had become more severe; vomiting asserted itself, and he had been unable to procure a movement of the bowel. Dr. Kelly brought him to my office in his buggy, and after an examination he was sent to the infirmary. Upon opening the sac it was found distended with water serum and contained a knuckle of gut, the constriction, however, not embracing the entire lumen; the constricted gut was black, and in attempting to deliver more of the gut through the ring the peritoneal coat came away in the grasp of the fingers. The constriction was evidently not far from the ileo-caecal valve, for while it was easy to deliver one end of the intestinal loop through the ring the other was apparently held by the head of the colon being pulled down to the entrance of the femoral canal; the portion of the damaged gut was intestinal lumen after the method of dealing with an appendicular stump, this enabling us to avoid a resection and save a great deal of time, a most important factor in an operation upon a man of this age. The gut was then returned to the abdomen and wound closed, the operation being completed in twenty-five minutes. The patient made an uneventful recovery, and returned to his home at the end of the second week.

The interesting points in this case are the age of the patient, the

sudden appearance of the hernia without any appreciable exertion, the extensive damage to the gut, the patient being on his feet and still attending to his duties, and the fact that the damaged point could be inverted and thus avoid a resection.

Case five is one of ventral hernia in a man forty-four years of age. The interesting feature of this case is the manner in which the hernia was acquired. Several years ago he swallowed a large fish bone, which for a time gave him no trouble; he then developed an abscess of the abdominal wall midway between the ensiform cartilage and the umbilicus, and upon this abscess being opened the fish bone escaped with the pus. The abscess cavity healed slowly, and was immediately followed by a hernia at this point. I have not yet operated on this patient, the truss that he has been wearing having caused an ulceration at site of hernia. As soon as this is healed I expect to do the Mayo operation on him.

Progress of Medical and Surgical Science.

Carbolic Antidote.—*Dublin Evening Herald*, April 9, 1904. The uses of turpentine. Further interesting experiments. What a Dublin discovery may lead to. The discovery made by Mr. Allen, the well known Dublin veterinary surgeon, that turpentine is an antidote to carbolic acid poisoning, is still attracting the attention of medical and pharmaceutical experts. Mr. Allen, it will be remembered, administered turpentine to two horses suffering from carbolic acid poisoning, and the animals recovered. A blacksmith, who was also treated by Mr. Allen in an emergency, recovered from carbolic acid poisoning after taking a dose of oil of turpentine. From inquiries which the *Herald* representative has made in expert circles in Dublin, it is plain that turpentine as an antidote in similar cases was never previously known.

So important is the discovery accounted in medical opinion in Dublin that further experiments have been made. A dog was given an overdose of carbolic acid yesterday by a leading chemical expert in the city, and displayed all symptoms of poisoning noticeable in the case of the poisoned horses. The poor brute began to stagger helplessly, the muscles twitched, and the eye-balls were almost jumping from the head. A few tablespoonfuls of turpentine—the ordinary stuff used every day in households—was given, and the animals soon recovered. It should be mentioned, however, that the dog is still suffering slightly from the effects, and can not be made to swallow any more turpentine.

Evidence, however, is fairly conclusive that turpentine is now proved to be a fairly successful antidote to carbolic acid poisoning. According to Mr. Allen, the horses never showed any effects resulting from the poisoning after being treated with turpentine. Neither did the blacksmith. If further experiments confirm the oil of turpentine treatment, an undoubted boon will be conferred on the public.

Rhus Poisoning.—This variety of dermatitis often requires the most active local treatment to afford relief to the suffering patient. Decoctions of white oak or black oak bark, also a strong decoction of

chestnut leaves, bathing the parts every three or four hours will often relieve the patient in from twenty-four to thirty-six hours. Fluid extract *grindelia robusta* in proportion of $\frac{1}{2}$ to 1 $\frac{3}{4}$ to 4 to 6 $\frac{3}{4}$ of water will many times cut short a seemingly severe attack. We also have a safe and almost a sure cure for this condition in hyposulphite of soda in one to six drachms of the drug to six ounce of water, and keeping the parts covered with a cloth wet with the solution.

Anesthesia of the Spinal Cord.—Bier, the rediscoverer of spinal anesthesia, protests against this name and reiterates that it is strictly an anesthesia of the spinal cord. He always protested against its general adoption, claiming that the procedure was still in the experimental stage and liable to prove dangerous. He now announces that the introduction of the suprarenal preparations has placed it on a safe basis. Their use renders it possible to insure strict localization of the cocaine at the point where its action is desired. Donitz first established that adrenalin injected into the lumbar sac is tolerated by small animals even in amazingly large amounts. It was then applied in the clinic in cases in which general anesthesia was contraindicated, if the patients expressed a willingness for its use. A total of 121 patients have thus been submitted to suprarenin or adrenalin cocaineization of the spinal cord. The patients' ages ranged from sixteen to eighty; all but twenty-two were men. Adrenalin was used in fifty-six cases, and in five instances no anesthesia was induced, while suprarenin failed six times in the sixty-five cases in which it was used. The patients were all extremely debilitated or suffering from serious affections which contraindicated general anesthesia. Not a single mishap occurred in any instance. The anesthesia did not extend so high as when cocaine is used alone, which further demonstrates its localization. It was necessary to make the injection higher up when the operation was above the buttocks region, between the second and third lumbar vertebra. The anesthesia extends higher up when the pelvis is raised a little, but caution is necessary when this is done, and further experience to determine the safe limits. It has been found possible to induce anesthesia in dogs over the entire body, including the head, with lumbar concaineization. Bier has the patient lie on the table, the upper part of the body raised, the spine curved, humping outward. A line drawn to connect the two crests of the ilium crosses the fourth vertebra. The forefinger is then carried from its spinous process to the process above and beyond it until it is in the interspace above, between

the second and third lumbar vertebra. The needle is then introduced into this interspace on the convex side of the spine, the side toward the table, and about one cm. to one side of the finger. The needle is readily pushed up and in. The injection is not made until the cerebro-spinal fluid appears. If it spurts in a jet it is advisable to allow a few cc. to escape. The syringe is then attached to the needle and the adrenalin or suprarenin injected. The syringe left attached to the needle closes the opening. After waiting for five minutes to allow the suprarenin or adrenalin to get in its work, the cocaine is injected from a second syringe. In ten minutes the patient is ready for the operation. The whole procedure is very simple, much more so than general narcosis. It can be done by an assistant in the ante-room, and during the fifteen minutes of waiting he can be preparing the field for the operation. The Quincke needle is used, with two well-fitting syringes. The solutions are made as follows: 5 cc. of the Höchst 1:1000 solution of suprarenin is mixed with an equal amount of physiologic salt solution and boiled up briefly before use. The whole amount is then injected. The cocaine is prepared by dissolving .1 gm. in 10 cc. of sterile physiologic salt solution. The amount of the solution needed for the day is sterilized by boiling. From .005 to .02 gm. of cocaine in a 1 per cent. solution is the dose. Alkalies precipitate the cocaine base in the needle, and consequently the syringes must not be boiled in soda water, but in pure water. The needles are boiled in a soda solution, kept in alcohol and syringed through with saline just before they are used. The physiologic salt solution is preferred by Bier, as he could not discover any advantage from solutions isotonic for the cerebro-spinal fluid. He thinks that failures to obtain anesthesia may be avoided by using fresh solutions of cocaine, and not injecting the fluid until the cerebro-spinal fluid is dropping rapidly from the needle. The needles must not be too long, and the tips should not be slanting, as in the latter case the cerebro-spinal fluid might flow out through it while only part of the tip was in the sac, and injection of the cocaine might distribute some of it through the neighboring tissues. Of course the dose of cocaine must be sufficiently large. On the whole, Bier proclaims that by the new technic the real dangers of spinal anesthesia are obviated. It is extremely important, moreover, that elderly and debilitated subjects tolerate the procedure remarkably well. It is further remarkable that elderly subjects very seldom exhibit any of the disagreeable by-effects. Bier has derived the impression from his experience that these by-effects are on the whole much reduced by the

addition of suprarenin or adrenalin, but they are still bad enough. In twenty-seven out of the fifty-six cases in which adrenalin was used he observed an outbreak of sweat, vomiting and tremor of the muscles during the anesthesia and afterward, as the most regular and distressing phenomenon, headache, with sometimes vomiting. The remaining twenty-nine were entirely free from these by-effects. Sometimes the headache was very intense and persisted a week. Slight rise of temperature was frequently noticed, but never the high degree and chill noted with the older technic. In a few cases there were transient retention of urine and stiff neck, the former possibly due to the surgical intervention on the pelvis. The same by-effects were noted with suprarenin, with the difference that the symptoms of irritation, retention of urine and rigidity of the back of the neck were rare and slighter. A swiftly transient paralysis of both peronei was noted in one case. Bier is convinced that the suprarenal preparations act as antagonists to the dangerous action of cocaine in spinal cord anesthesia. The list of cases in which he has applied the combination includes nine cases of amputation and resection of the rectum according to Kraske; eight of amputation above or below the knee; one of Edebohl's decapsulation of the kidney (bilateral); three of resection of the hip joint; eleven operations for hemorrhoids and one of prostatectomy. Those of the patients who had previously undergone general anesthesia were asked as to which technic they preferred, and the majority decidedly favored the spinal cocainization, while others preferred general anesthesia, and one patient declared they were both equally horrible.—*The Journal of the American Medical Association*.

Erysipelas.—As a local antiseptic dressing in the treatment of erysipelas the following is recommended by Stroell in *American Medicine*:

℞ Acidi carbol.
Tinct. iodi, aa gr. xv.
Mucil. acaciæ, ʒ j.
Alcoholis (pure) ʒ v.

M. Sig. Shake and paint over the affected area every two hours until the swelling and shiny redness have disappeared.—*New England Medical Monthly and the Prescription*

Diarrhea of Phthisis.—The diarrhea in phthisis may be simply due to overfeeding or otherwise to organic lesions in the alimentary tract, such as tubercular ulceration or amyloid disease. In the former instance a milk diet should be temporarily resorted to, and if there are

organic changes a starch and opium enema may be of use, or the following combination given by the mouth :

- ℞ Plumbi subacetatis, gr. if.
 Liq. morphine, *m* v-x.
 Acidi acetici dil., *m* x.
 Aq. chloroformi, ℥ j.
 M. Sig. At one dose, to be repeated three times a day.

Or :

- ℞ Bismuthi salicylatis, gr. xx.
 Sodii bicarb., gr. xv.
 Mucil acaciæ, gr. x.
 Aq. menth. pip., ℥ j.
 M. Sig. At one dose, to be repeated once or twice daily.

Or :

- ℞ Ichthyoformi, ℥ ss.
 Tannalbin.
 Bismuthi subgall., aa ℥ j.
 Codeinæ sulph., gr. iss.
 Ol. mentha. pip., *m* iss.
 M. et div. in chart. No. vj. Sig. One powder every three to six hours.
 —*New England Medical Monthly and the Prescription.*

Leuchorrhœa of Young Unmarried Women.—The following prescription will be found of more or less service :

- ℞ Tinct cantharidis.
 Tinct. ferri chloridi.
 Acidi phosphor. dil., aa *m* v.
 Syr. limonis et aq., aa q. s.
 M. Sig. A teaspoonful in water after meals.—*New England Medical Monthly and the Prescription.*

Heroin in Whooping Cough.—Dr. H. H. Haralson, of Vicksburg, Miss., recommends the administration of heroin, beginning early in the attack and continuing it throughout the catarrhal and paroxysmal stage. During the last stage he recommends tonics, good nourishment and proper hygienic surroundings. The following combination is employed by him :

- ℞ Heroin hydrochlor., gr. $\frac{1}{4}$ – $\frac{1}{2}$.
 Tinct. belladonna, ℥ i.
 Spir. frumenti, ℥ i.
 Syr. simplicis, q. s. ad ℥ 4
 M. Sig. One teaspoonful every five or six hours

Dr. Haralson seems to be very enthusiastic over his success in ameliorating the paroxysm and lengthening the time between the paroxysms as well as cutting short the duration of the disease.—*New England Medical Monthly and the Prescription.*

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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Editorial.

The importance of chronic constipation as a factor in the causation of disease and its great weight with the laity as the foundation of all their troubles has from time immemorial been a subject for discussion and along widely different views. Pertinent to the subject, we respectfully call attention to the following from the *Journal of the American Medical Association*, May 7, 1904, as a timely review of this subject with reference to its being such a factor in the causation of disease:

Bouchard, Glenard and Peyot hold it responsible for the gravest symptoms, attributable to autointoxication from resorption of fecal matter; on the other hand, those who, like Osler and Boas, think that autointoxication from this cause is rare, and that the great majority of persons with chronic constipation suffer little inconvenience from this condition. The experience of most practitioners bears out the latter view. Every physician knows of persons in fair health who have infrequent and scanty stools, while cases are on record of apparently

healthy individuals who habitually went from two weeks to several weeks to several months without any evacuations from the bowels. This "primary functional habitual constipation" is almost universally attributed to an abnormality of the nerves of the intestinal wall, leading to a lessening of normal peristalsis—tonic form—or to a spasmodic contraction of the muscular coat—spastic form. Nothnagel adds to these a form due to atrophy, congenital or acquired, of the muscular coat. This theory, almost unanimously accepted, was called in question two years ago by Strassburger, who advanced the theory that the diminished peristalsis in chronic constipation is due, not to any abnormality in the innervation of the intestine, but to absence of the usual stimulus to peristalsis. Normally the stimulus is furnished by the products of bacterial fermentation, the acids, soaps and gases. Strassburger succeeded in demonstrating the fact that the feces of chronic constipation are abnormally poor in bacteria, that while normal twenty-four hour feces contain 88 g. of bacteria (after all fluid has been removed by evaporation), the feces of constipated persons contain only from 2.6 g. to 5.5 g. The reason for this diminution he finds in the composition of the feces, which are almost devoid of remnants of the ingested food, such as muscular fibers and cellulose sheaths, the usual nutrient medium for the intestinal flora. Strassburger thus concluded that the underlying cause of chronic constipation is a too complete utilization of the ingested food. These statements of Strassburger seem to have just received confirmation at the hands of Lohrlich, working in Schmidt's clinic in Dresden. Lohrlich finds that the amount of feces from normal persons averages 245.5 g. per day; from constipated persons only 125.5 g., and this difference is not due to abstraction of fluids, for the difference in weight of the evaporated feces in the two cases is still greater—59.3 g. for the normal and only 33.9 g. for the constipated. The diminution affects all of the constituents, but most markedly the nitrogen, which is reduced to 1.5 g. from the normal 2.9 g.

Weakened peristalsis alone, as in the constipation caused by the administration of opium, gives rise to smaller stools, but this is due only to abstraction of fluid, the solid feces are equal or even greater in amount than under normal conditions.

It might be said that this diminution of the normal intestinal contents is due to an abnormal activity of the bacteria in the intestines, to excessive fermentation. But this is disproved not only by ordinary clinical experience, which finds symptoms of abnormal fermentation

very rarely in these cases, but also by Strassburger's researches just cited, and by the fact that the feces from chronic constipation show no signs of such a process. They are almost odorless, neutral in reaction, and may be even kept in the incubator without decomposition.

Chronic constipation, therefore, is, according to these investigators, due to diminished motility of the intestinal wall, but this is in its turn due to the overutilization of the ingested food in the small intestine. The feces in the large intestine are poor in nutriment, and can not support bacteria enough to produce the acids and gases of decomposition which normally excite peristalsis. It follows that a rational therapy would be directed not to strengthening the motor apparatus of the intestines, but to the increase of indigestible substances in the diet in order to provide nutrient media for the intestinal bacteria.

NOTE.

American Medical Editors' Association will hold its annual meeting June 6th, in Atlantic City, N. J., at 2 P. M., in the parlors of the Hotel Dennis.

Necrology.

DR. F. C. LEBER.

Dr. F. C. Leber, one of the oldest and best known physicians in the city, died at his home, 548 East Jefferson street, after an illness of twelve months, of Bright's Disease.

Dr. Leber was born in Bramberg, Hessen, Germany, January 25, 1834. At the age of thirteen he came to this country with his mother. He received his early education at the grammar schools of this city. After leaving the public school he engaged in the business of a barber, which he pursued until he was twenty years of age, when he took up the study of medicine.

He graduated at the University of Louisville soon after the war. Dr. Leber enjoyed a large practice and was held in high esteem by his associates.

He held many positions of trust during his professional career.

Book Reviews.

Infant Feeding. By Louis Fisher, M.D. Third edition. Philadelphia: F. A. Davis Co., publishers, 1904. Price \$2.00 net.

This little book of 345 pages, by Dr. Lewis Fisher, on "Infant Feeding in Health and Disease," is assuredly a timely one. The great and important question of infant feeding has certainly forged to the front in the last decade or so. In the period of infancy (and to a lesser extent early childhood) the question of proper feeding decides, other things being equal, whether we are to have a strong, vigorous, robust infant, or a weak, puny, poorly nourished one. Since the question of infant feeding has been made the subject of especial investigation by men qualified by education and experience, there has been a marked decrease in the prevalence of the disorders of mal-nutrition in general. Rickets and scurvy are now relatively uncommon in private practice, especially if compared with the practice of twenty years ago. And even acute inanition, mal-nutrition and marasmus are commonest in foundling institutions, children's hospitals and the like. Dr. Fisher takes up very thoroughly the question of infant feeding throughout the entire range of the subject, giving especial attention to:

1. The comparative chemical analysis of milk and the various substitutes for milk.
2. The percentage method of feeding, and the adapting the infant's food to its age and digestive capacity.
3. Certain disorders of mal-nutrition, arising from improper feeding.

Each chapter is thorough, practical and easily understood. And, on the whole, we think that the book is desirable and useful to any physician who is interested in children, whether he be a pediatrician or a general practitioner.

The Worth of Words, by Dr. Ralcy Husted Bell. With an Introduction by Dr. William Colby Cooper. Third edition. Revised and Enlarged. Price \$1.25 postpaid. New York City: Hinds & Noble, Publishers, 31-35 West Fifteenth street.

This very important little book is one that ought to be read by all who love to preserve the meaning of the mother tongue, and to be thoroughly studied by those who wish to be well informed on good English. Dr. Bell has so arranged the text as to make the book exceedingly interesting, and his illustrations do away with the tedium

of a study that is usually very dull and heavy. The arrangement of the text is in paragraphs on the following subjects, with examples: "Misused Words," "Vulgarisms," and "Words—No—Words," "Everyday Errors," "Slang," "How Word Meanings Change," and a new appendix containing a number of additional hints.

Gynecology; Vol. IV. of the Practical Series of Year Books, by Emilius C. Dudley, A.M., M.D., and Wm. Healy, A.B., M.D. March, 1904. Chicago: The Year Book Publishers, 40 Dearborn street.

Advances in gynecology of late years have been more rapid than in most other branches, and the editors of this little book have not been remiss in gathering matter relevant to this subject. Scarcely any progress in the science of female disease has escaped record on this little book's pages, and many allied subjects are appropriately given space.

The price, \$1.00 per volume or \$5.50 for the series of ten volumes, is in the reach of all, and we regard the buying of this series as a good expenditure.

BOOKS RECEIVED.

Musser's Medical Diagnosis. New (5th) edition. A Practical Treatise on Medical Diagnosis for Students and Practitioners, by John H. Musser, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals; Consulting Physician to the Woman's Hospital of Philadelphia and to the West Philadelphia Hospital for Women, to the Rush Hospital for Consumptives and the Jewish Hospital of Philadelphia; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians; President of the American Medical Association, etc. New (5th) edition, revised and enlarged. In one octavo volume of 1213 pages, with 305 engravings and 63 colored plates. Cloth, \$6.50; leather, \$7.50; half morocco, \$8.00, net. Philadelphia and New York: Lea Bros. & Co., Publishers.

Manual of Materia Medica and Pharmacy. Specially designed for the Use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students, by E. Stanton Muir, Ph.G., V.M.D. Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third edition, revised and enlarged. Crown octavo, 192 pages. Interleaved throughout. Bound in extra cloth, \$2.00, net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

Clinical Examination of the Blood, by Richard C. Cabot, M.D. With colored plates and engravings. Fifth revised edition. New York: Wm. Wood & Co., 1904.

Graves' Disease, with and without Exophthalmic Goitre, by William Hanna Thomson, M.D., LL.D. New York: Wm. Wood & Co., 1904.

Notice.

NEW COUNTY BOARD OF HEALTH LAW.

(As Amended in 1904.)

SECTION 1. That an act to amend an act entitled "An act creating a State Board of Health, regulating the appointment of county boards, and prescribing their duties and compensation," which was approved on the 20th of April, 1893, be amended by repealing that portion of said act designated in Kentucky Statutes (Carroll Edition) as section 2055, and all laws in conflict with this act, and enacting the following instead:

"Sec. 2055. It shall be the duty of the State Board of Health to appoint three intelligent and discreet, licensed and practicing physicians residing in each county of this State, who, together with the county judge and one person elected by the fiscal court of each county, shall constitute a local board of health for the respective counties in which they reside, and such persons, as members of the local board, shall hold their office for a term of two years from the date of their appointment or election, and until their successors are appointed or elected, and such local boards are empowered, and it shall be their duty, to inaugurate and execute and to require the heads of families and other persons to execute, such sanitary regulations as the local board may consider expedient to prevent the outbreak and spread of cholera, small-pox, yellow fever, scarlet fever, diphtheria and other epidemic and communicable diseases, and to this end may bring the infected population under prompt and proper treatment during premonitory or other stages of the disease, and they are empowered to go upon and inspect any premises which they may believe are in an unclean or infectious condition, and it shall be empowered to fix and determine the location of an eruptive hospital for the county, sufficiently remote from human habitation and public highways as in its judgment is safe, and said boards are authorized and shall have power to enforce the rules and regulations adopted by the State Board of Health, and any person who shall fail or refuse, after written notice from the local board or State Board, to observe or obey the written request shall be fined not less than \$10 nor more than \$100 for each day he so fails or neglects, and it shall be the duty of physicians practicing their profession in any county in which a local board is

organized to report any or all of the above-mentioned diseases under their special treatment to such local board, and it shall likewise be the duty of heads of families to report any of said diseases, when known by them to exist in their respective families, to such local board, or to some member thereof, within twenty-four hours from his or her knowledge of the existence of such disease, and such local board shall make report to the State Board of Health at least once in every three months :

“ 1. Of the character of the infectious, epidemic and communicable diseases prevailing in their county.

“ 2. The number reported as afflicted with such disease.

“ 3. The action taken by such boards in arresting the progress of such epidemics, and the visible effects of such action ; and shall also make special reports when they deem it expedient, or when required by the State Board, and the local board shall receive no compensation for such services.

“ The local board shall appoint a competent practicing physician, who shall be the health officer of the county and secretary of the board, whose duty shall be to see that the rules and regulations provided for in this act, and the rules and regulations of the State Board of Health, are enforced, and who shall hold office at the pleasure of said board, and he shall receive a salary, the amount of which is to be fixed by the fiscal court at the time or immediately after his election. In no state of case shall said health officer claim or receive from the county any compensation for his services other than the salary fixed by the fiscal court.”

SEC. 2. All laws and parts of laws in conflict with this act are hereby repealed.—*Kentucky State Medical Association Bulletin.*

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Regular meeting at Seelbach's Hotel, May 3, 1904, with Dr. Irvin Abell as host. The meeting was presided over by the President, Dr. J. W. Irwin, with Dr. A. D. Willmoth as Secretary *pro tem*.

STRICTURE OF THE URETHRA.

Dr. Irvin Abell: The patient is forty-seven years of age, and as a child noticed difficulty in passing his urine. At the age of fifteen his father noticed it and took him to a physician, who introduced a silver tube, three inches long, into the urethra, to be worn at repeated intervals for three weeks at a time. This increased the stream, and he has had no treatment until the present. When I first saw him seven months ago the first three inches of the corpus spongiosum had been changed into cicatricial tissue, and if there is such a thing as an impassable stricture this was one. The urine was passed in drops, and after persistent efforts I was unable to introduce the smallest filiform further than half an inch.

Without any guide I opened the urethra in the perineum, which was very large, and passed a 32 sound up to the posterior face of stricture, causing the modular mass to set up on end of sound, after which some was bored through with a probe-pointed tenotome. The perineal wound healed promptly, and he has since been passing a sound at stated intervals, a number 27 now fitting snugly. I think he will have to use a sound as long as he lives.

TYPHOID WITH PLEURAL EFFUSION.

Dr. J. A. Flexner: About the first of the year a young man twenty-five years old came so see me with pain near the spleen, temperature $99\frac{1}{2}^{\circ}$, and who had worked that day. I found a little tenderness near the tenth rib, which I took to be an intercostal neuralgia. Within thirty-six hours I found him with a coated tongue, temperature 103° and tympanitis; I thought it was typhoid fever, and treated him for that. At the end of the second week he had increasing pain near the spleen, with bulging, and the accumulation continued until it had completely filled the pleural cavity. Up to that time the temperature had run a typical course. He developed no cyanosis, and had a good pulse. I did not tap his chest, and he now has a breath of three

fingers of unexpired lung. It is the only typhoid I ever saw with pleural effusion that ran this course. All the typhoid symptoms developed later.

Dr. Carl Weidner: Such a large effusion absorbed in such a short time is remarkable. He may have had a pleurisy independent of the typhoid or accompanying it. The diagnosis of typhoid is not always easy, and the early symptoms might have been those of pleural effusion. I would never allow any exudation to remain longer than two weeks at a time.

Dr. T. P. Satterwhite: Six weeks ago a little boy about eight years of age had what I took to be typhoid fever. He had a high temperature, some cough, rapid pulse, and I treated him for typhoid. The high temperature and cough increased, and after about four weeks there was a decided bulging on one side of the chest. I aspirated this, and from that time he seemed to get better and became convalescent. About a week later he began to expectorate, and evacuated about a cupful of pus every four or five days. Fortunately, he is well now.

Dr. Flexner: The question of pleurisy occurred to me in the first place, but I could not make it out. The whole course of the disease was typical of typhoid. As to the removal of the exudation, I would not wait two weeks if I thought the symptoms called for it. Pleural effusions do occur in typhoid fever, and the lung abscess may have been typhoid in character.

Dr. J. W. Irwin: In the case reported we have a history of typhoid with high temperature, rapid pulse, rose-colored spots, no diarrhea, and effusion into the left side, which was absorbed in five or six weeks, with a strong heart. This does not correspond to the description of typhoid, although we can not doubt the diagnosis. I have never seen a case like it. It disobeys all the laws of typhoid fever except for the spots, temperature and diaso-reaction. I would have taken it to be a pleuritic trouble from the beginning. It is difficult to say what is a characteristic temperature in typhoid fever if complications are present. Some of these times I will report a case of abscess of the lung, which discharged sixteen quarts of pus, following typhoid fever.

Paper by Dr. Irvin Abell: "Hernia." Under original articles this issue.

DISCUSSION.

Dr. Carl Weidner: I have been so partial to chloroform that I would like to defend it. I have seen the rules of its administration overstepped, and seen a change of the Esmare that I regard as danger-

ous. It should be made of flannel and not of gauze. Some anesthetists make the great mistake of putting in a thick layer of absorbent cotton soaked with chloroform. This does away entirely with the idea of the inventor.

Dr. J. A. Flexner : Much of the trouble with chloroform is due to the quantity given within a given length of time. The drop method is not likely to cause an overdose. I think the trend of modern opinion is altogether in favor of ether.

Dr. T. P. Satterwhite : In one of these patients the gut was black, yet it was returned with recovery. Some years ago I was surgeon in the City Hospital, and had a case of a woman with a little tumor about the size of an almond, with great pain and disturbance. Dr. Holloway thought it was not a hernia, but as I thought the woman was going to die I cut down on it and found a lump of fat. Dr. Holloway told me to transfix it and cut it off, but fortunately I opened it and found a black gut. The anesthetist declined to give any more chloroform, so I returned the gut, sewed her up and she got well.

Dr. W. H. Wathen : Most of these cases differ from the ordinary cases we see. We occasionally find children imperfectly developed at birth, and the anterior abdominal wall does not always close, and a protrusion of the viscera results. I remember some years ago a premature child with a large opening through which the entire liver protruded.

I want to report the case of a fleshy man with an abscess out of which passed a fish bone. After the abscess closed a hernia developed. This was an unusual case, but we often find that fleshy people have less resistance than others, and ventral or umbilical hernias are more likely to occur. There is no method of cure outside of operation, and the so-called Mayo operation is the best one where you can utilize the fascia. I have never understood why surgeons insist on bringing the recti muscles together, for this effort has proved a failure. Mayo's operation includes the overlapping of the fascia, preferably transversely, and the results are perfect.

I operated on a case two years ago that under the old method would have been considered inoperable. She was an old lady, with a thigh as large as my body, and a hernia as large as two fists. Most of the omentum was removed and union made transversely, the upper layer of fascia overlapping the lower for an inch. The peritoneum was sutured with fine catgut and the overlapping layers of fascia with

silver wire. The large wound was sutured with silkworm gut, and up to this time there has been no sign of recurrence. When you merely bring the muscles together you do not get this result.

Dr. George W. Griffiths: During thirty-eight years of practice I have confined myself almost exclusively to chloroform, without a single fatal result. At Sts. Mary and Elizabeth Hospital they give it with the single Esmarc's make, it is dropped from the bottle with a piece of absorbent cotton, which is a splendid idea. I am very partial to chloroform, and have no fear of it whatever.

Dr. John R. Wathen: I recently had three cases of the strangulated type that may be of interest. The first I was called by Dr. Bennett to see, a young man, aged twenty-seven, who had never had hernia before, but developed an oblique inguinal hernia. I tried for about five minutes to reduce it, but without success. It had been down for six hours, and when I operated I found the intestine almost gangrenous, and had to apply hot cloths to restore circulation. I did a Bassini operation, and he made a good recovery.

The second was in a man of eighty, referred by Dr. Montgomery. He had a very large scrotal hernia, which could be reduced, and he was wearing a truss. When I saw him it had been down a day and a half, and he could not reduce it. After working three-quarters of an hour I reduced it, and he has been well ever since.

The third case, referred by Dr. Montgomery, was a young woman whom I saw in the afternoon, with a femoral hernia down that morning. I tried for fifteen minutes to reduce it without success. I operated that evening, and found a very ugly condition. By careful manipulation I reduced it, did a Bassini operation, and she made a good recovery.

Dr. M. F. Coomes: As to chloroform, I have had as much experience as any man outside of a general surgeon. I have never lost a patient, and I expect Dr. Abell's patient was getting too much chloroform. Most anesthetists give too much. In a case of hernia I do not see why he should be kept profoundly under it.

As to the child, I recently saw a curious case with Dr. Huber. I found that he had delivered twins, born in each other's embrace, with the legs of one perfect and the other imperfect. The sexes could not be made out absolutely, but they were evidently boy and girl. I tried to get the children, but could not.

I have a photo of a child with no abdominal walls, and the mother claimed to have seen a cow disemboweled.

Dr. F. W. Samuel: In the first case, that of the young man, the treatment was admirable. The testicle was not transplanted because it had degenerated, and would have resulted not only in distress, but perhaps in sarcoma of the undescended testicle. All will agree that it is better out than in. In a young child the question of transplantation would have been important.

The case of the baby was the most unique I ever heard of. Its age was responsible for the failure to save life.

I have had a large experience with chloroform, but always prefer ether. If Esmarc's advice be followed, there is no danger from overdose. The matter of the anesthetic lies entirely with the anesthetist these days, and he gives the one with which he is most familiar unless the operator has a preference. Most operators prefer ether. The evidence presented by Porter is such as to make me believe the remote effects of chloroform to be as great as of ether.

As to suture, I prefer one that can be buried and can take care of itself. When I anticipate suppuration, I use a through and through suture at all times. Dr. Abell's results were remarkably good.

The woman with the three hernias was a unique case, and I never saw three in one case. So far as the predisposing cause of ordinary hernia is concerned, we do not know the real cause of hernia. Intra-abdominal pressure in certain diseases, such as those accompanied by coughing, is a factor; I doubt if strains and blows can produce it. I believe ventral hernia, with a few exceptions, is caused by suppuration. It has been my experience to operate on a gentleman with an epigastric hernia. It was in a patient with fat abdomen, and gave great distress. I operated on it, and the opening was about the size of a silver dollar. After examining the literature I found but one case mentioned, and that was in "Park's Surgery." In that case I found that, after opening up the hernial region, I had to bring the structures together crosswise to the median line. I closed with a cross suture with great ease. It has been now about four months, and he is in perfect health. I suggested that a binder be worn.

Dr. T. P. Satterwhite: I remember a case of a fleshy man with hernia some years ago. He would not consent to operation, so we just put him in an up-and-down-position, and by the next morning the hernia was reduced.

Dr. Carl Weidner: I would like to ask what is meant by hernia into the umbilical cord?

Dr. J. W. Irwin: When I was a medical student at the Jefferson College there were two prominent surgeons, Pancrost and Gross. Dr. Pancrost gave ether and Dr. Gross gave chloroform. Dr. Pancrost smothered his patients quickly with ether, and had three or four deaths. One thing that I noticed about ether was that it took a long time to get over the effects of it. Toward the end of my third year Dr. Gross came before the class one day and said: "You will be surprised at the conclusion which I have reached. I have had chloroform administered for nearly fifty years, in more than six thousand cases, without a single death. I yield my preference in deference to Dr. Pancrost and now give ether, because I can not afford to have a death from chloroform when he says there are fewer or no deaths from ether, though I know he has had five."

Dr. Abell (closing): I do not know the amount of chloroform the patient received, but it could not have exceeded six or seven drachms. The safety of an anesthetic depends largely upon the individual who gives it, but ether is shown to be so much safer that it is better to give it unless contraindicated. I lost one case of a young woman otherwise healthy, with an intro-ligamentous cyst, who, I am satisfied, died from chloroform. She lived nearly thirty hours, but the pulse never came down. There was no hemorrhage and no infection. I can recall a number of cases which ran a similar course. Chloroform directly depresses the vasomotor tension, being the exact opposite of ether, which is a stimulant.

In the femoral hernia on the old patient, on opening the sac you could just see a knuckle of gut. It could have been pushed back, but I was satisfied it should be investigated. In catching hold of it this section practically gave way, and had that been pushed back the man would have been lost later from leakage. In cases of strangulated hernia it is better to pull the gut out and inspect it.

As to the child, what I meant by hernia into the umbilical cord was this: The cord was attached about as ordinarily it is, and there was a cavity in the center of the cord about three inches in length communicating with the abdomen, and the intestines of the child were adherent to this sac in the cord. That was ruptured, and the entire abdominal contents were out through the opening.

As to the point discussed by Dr. Samuel, I believe replacements must be made during the first year of life.

POTT'S FRACTURE.

Dr. Ewing Marshall (report of case): Fibula fractured about three

inches above the ankle and the tip of the malleolus internus splintered off.

These cases give great anxiety to the conscientious emergency surgeon. Great tendency to leave a weak joint with the mobility seriously impaired. Foot tends to be displaced outwards. All appliances have this in view.

With a strip of adhesive plaster started just below the site of fracture of the fibula and carried under the instep then turning the sole of the foot slightly in and up, then attaching the adhesive an inch or so above the level of the seat of fracture in the fibula on to the anterior surface over the tibia meets the above requirement. Over this I put a cotton dressing. Then I lay down the Gigli saws, holding them where I want them with adhesive strips. I put one in front from just below the knee down to the toes. One behind from a corresponding place below the popliteal space to the heel, a third crossing this at the heel and going up the sole to the toes. Then I apply a plaster of Paris dressing, rather heavy.

When the plaster is nearly dry I cut out with my Gigli saws. This is the cast it makes. If convenient, I put a white stocking over the Gigli saws before applying the plaster of Paris. This makes a fine lining for your cast. Then I bind the edges of the cast with adhesive strips. Around the cast, while on the leg, I apply strips of adhesive to take the place of a dry roller to hold the halves together. In front I turn it back from the cut edge and punch a hole in it. To this hole I attach a piece of shoestring. The adhesive acts as a hinge behind, and I tie the strings in front. I am a firm believer in the early passive motion to save time and function where there has been injury around a joint.

The originator of this detachable plaster of Paris dressing was Dr. C. O. Bechtol, of Chicago. The addition of the adhesive strips I originated.

**PRELIMINARY PROGRAM OF THE ANNUAL MEETING OF
THE AMERICAN UROLOGICAL ASSOCIATION,
ATLANTIC CITY, JUNE 8th AND 9th, 1904.**

The papers are here alphabetically arranged, according to the authors' names. In the final program they will be grouped in their proper classifications.

Reading of papers is limited to twenty minutes each; discussions to five minutes.

1. President's Address: Ramon Guiteras.
2. Winfield Ayres, New York: "The Treatment of Catarrhal Pyelitis by Intra-Pelvic Injections."
3. F. Bierhoff, New York: "Contributions to the Study of Gonorrheal Involvement of the Prostate."
4. Carl H. Brandt (by invitation), Hot Springs, Va.: "Acute Nephritis Due to Uric Acid Gravel."
5. Follen Cabot, New York: "An Analysis of One Hundred Consecutive Cases Examined with My Simplified Cystoscope."
6. Arthur L. Chute, Boston: "The Pain of Osteo-Arthritis of the Spine: Its Bearing on the Diagnosis of Urinary Diseases."
7. Charles G. Cumston, Boston: "The Symptomatology and Diagnosis of the Polycystic Kidney."
8. Daniel S. Gardner, Massillon, O.: Title to be announced.
9. Austin H. Goelet, New York: "Hephiroptosis: Its Gynecological Importance."
10. Francis Wagner, Washington: "Experience Gained from Fifteen Cases of Vesical Obstruction Operated on by Galvano-Cautic Prostatotomy."
11. John A. Hawkins, Pittsburg: "Abscess of the Prostate."
12. Louis Heitzmann, New York: "The Clinical Value of Microscopic Urinalysis."
13. Ernest V. Hubbard, New York: "An Aid to the Examination of Urea and Urinary Solids for the General Practitioner."
14. Howard Kelly, Baltimore: "Additional Cases of Diagnosis of Calculi in the Ureter or Renal Pelvis with the Wax-tip Catheter."
15. Gustav Kolischer, Chicago: "Pericystitis in the Male and Female."
16. F. Kreissl, Chicago: "Further Contributions to Lavage of the Renal Pelvis."
17. W. E. Lower, Cleveland: Title to be announced.
18. Granville MacGowan, Los Angeles: Title to be announced.
19. E. G. Mark, Kansas City, Mo.: "Urethral Endoscopy; Presentation of a New Urethroscopy."
20. Willy Meyer, New York: "Nephrotomy and Urethrotomy for Impacted Ureteral Calculus."
21. G. Morgan Muren, Brooklyn: "A Plea for More Conservative Genito-Urinary Instrumentation."
22. R. F. O'Neil, Boston: "Hematuria Due to Bilharzia-Hematobia, with Report of a Recent Case."
23. T. M. Reade, Springfield, O.: Title to be announced."
24. G. A. deSantos Saxe, New York: "Aids to Rapid Clinical Examinations in Urology."
25. Oliver C. Smith, Hartford: "The Indications for Perineal Bladder Drainage."
26. Charles S. Stern, New York: "The Methods of Obtaining Separate Urine from the Kidney"
27. G. S. Whitesides, Boston: "Teaching of Cystoscopy."
28. Abr. L. Wolbarst, New York: "The Role of the Prostate in Affections of the Urinary Tract."

29. Ferd C. Valentine and Terry M. Townsend, New York: "The Irrigator Versus the Syringe in Urinary Diseases."

Authors who may desire to correct the titles of their papers are requested to notify the Secretary before May 20th.

Members who have not sent in titles are urged to do so at once.

The annual dinner will be held at the Windsor Hotel on Wednesday, June 8th, at 7:30 P. M. (\$2.00 per plate.) Members who desire to attend will please to inform the President, stating the number of seats wanted.

The following matters will be brought before the annual meeting:

1. Consideration of the invitation to affiliate with the American Medical Association.

2. Election of officers for the ensuing term,

RAMON GUITERAS, M.D.,

President.

75 West Fifty-fifth Street, New York.

FERD C. VALENTINE, M.D.,

Secretary.

31 West Sixty-first Street, New York.

THE BOURBON COUNTY MEDICAL SOCIETY.

The Bourbon County Medical Society held its regular monthly meeting in Paris City Council Chambers, Thursday, May 12, 1904, at 3 P. M. The following papers were read:

"Ulcers of the Leg," Dr. A. C. Wilmott.

"Iritis: General Practitioner's Standpoint," Dr. Wm. Kenney.

"Manifestations of Uremia," Dr. C. G. Daugherty.

W. FITHIAN, Pres.; F. L. LAPSLEY, Vice Pres.; C. G. DAUGHERTY, Sery.

THE NEW YORK COUNTY MEDICO-PHARMACEUTICAL SOCIETY.

 Last meeting before summer intermission.

Regular meet on Friday evening, May 27, 1904, at 8:15, at the Tuxedo, Madison Avenue and Fifty-ninth street.

PROGRAM.

1. Election of new members.

2. Payment of dues.

3. Papers and Discussions.

Professional Bills—Contracting, Concocting and Collecting.

Ill Bills—Adolph Rupp, M.D.

Pills—E. D. Lawall, Ph.G.

Fill Bills—W. B. Lederer, D D.S.

Papers limited to twenty minutes and discussions to five minutes.

President—A. Ernest Gallant, M.D., 60 W. Fifty-sixth street, N. Y.

Vice President—Samuel S. Wallian, M.D.

Second Vice President—James Moran, M.D.

Secretary—Joseph Gutfreund, M.D., 250 E. Sixty-first street, N. Y.

Treasurer—Samuel F. Brothers, M.D.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. — RUSKIN.

Original Articles.

CAN BOVINE TUBERCULOSIS BE TRANSMITTED TO MAN?*

BY DR. M. K. ALLEN.

Ever since the utterances of Koch before the British Congress on Tuberculosis, and subsequently reiterated before the International Conference on Tuberculosis at Berlin, in which he recited his failure to produce tuberculosis in animals with bacilli from human sources, which led him to conclude "that man is insusceptible to bovine tuberculosis" doubt has existed in the minds of some as to whether bovine tuberculosis is ever transmitted to the human family. The failures as reported by this eminent authority may have been due to the use of bacilli of low pathogenic power. However this may be the statement then made by Koch has served to stimulate research in this direction by many men who are competent to engage in this character of scientific work throughout the entire world. Investigation along these lines have been numerous, and of a sufficiently harmonious character to establish conclusions which may reasonably be characterized as reliable and authentic.

The public mind, outside the medical profession, fails to recognize or appreciate the importance of the adoption of measures calculated to stay the ravages of a disease so prevalent and fatal in character as to cause one-seventh of all deaths occurring in this country. In fact, it is possible that even the medical profession, outside of public health

*Read at Louisville Clinical Society.

workers, do not stop to consider the terrific mortality from this disease among our people, regardless of condition, or to seriously consider prophylactic measures intended to prevent sickness and death occurring therefrom.

It is true that much has been done, and is now being done, by various organized bodies of men for the cure of consumption. The Congress on Tuberculosis, heretofore referred to, was international in character, and was attended by representative scientific men in the medical profession from all parts of the world, and being inspired by the spirit of man's humanity to man, and a praiseworthy desire for the welfare and happiness of mankind in general, the crowned heads of Europe, such as the Czar of Russia, the Empress of Germany, the Emperor of Austria, the King of Saxony, the King of Sweden, the young Queen of Holland, and the Queen of England all lent their presence and influence to this first great and useful meeting of this character. The gathering together of the forces of humanity from all over the civilized world, in one united effort to combat the most destructive of all diseases, has served to propagate knowledge and ripened experience, which has since to some extent been applied with fruitful results. In this country we have what is known as "The American Congress on Tuberculosis," an organization composed mostly of competent scientific medical men, who meet annually for the purpose of devising means and measures not only calculated to cure, but to prevent the dissemination of tuberculosis, and to educate the afflicted and their friends as to management of individual cases. The importance of the establishment of National, State and municipal sanitorias for the proper care and treatment of consumption is constantly being urged by sanitarians and health officials throughout the entire world. These recommendations have stimulated action in some directions, and as a result a few institutions of this character have been established, mostly, however, through the generosity of philanthropically inclined persons.

The experience of these sanitorias is shown to have been favorable to the cure of tuberculosis, some claiming 70 per cent. of cures when patients are admitted in the incipient stage, and there is some reason to believe that this claim is not an exaggerated one, because pulmonary tuberculosis in the earlier stages is, indeed, one of the most curable of all acute diseases with a chronic tendency.

Sanitoria for the treatment of children should be established on the seashore and for adults in mountainous, or at least in elevated healthy

regions, with an altitude, if possible, of between 1,000 and 2,000 feet, on porous ground with a southern exposure, and as nearly as possible protected against the coldest winds, and preferably surrounded by a pine forest. It will be observed by reviewing the literature on the subject concerning the cure of consumption and the statistics of the results obtained by more than three hundred of the leading pathologists of the world, reporting one hundred autopsies made on people having died accidentally, or of diseases where the cause of death assigned was other than tuberculosis, twenty to twenty-five showed evidences of healed tuberculous lesions (cicatrization or calcareous formation). It is now confidently claimed that the chances of this disease being cured in from six to nine months—provided that it is discovered at an early period—are at least 50 per cent. I must not digress further, however, from the original object and title of this paper, as it was my intention to consider more particularly the question of whether or not bovine tuberculosis can be transmitted to man, and if so should not methods be adopted to prevent it?

For some years past bovine tuberculosis has rapidly increased in some portions of the world, thus causing reason for concern, if not alarm, both because of the effect in reducing the general food supply, and for the still greater reason of the danger to human health and life.

An investigation of the slaughterhouse statistics collected at the United States Bureau of Animal Industry shows that 14.6 per cent. of the cattle in Prussia are tubercular; in Saxony the percentage is 29.13; in the city of Leipsig 36.4. Of 20,850 animals in Belgium tested with tuberculin, in 1896, 48.88 per cent. reacted; of 25,439 tested in Denmark, between 1893 and 1895, 49.3 per cent. reacted; and of 67,263 tested in 1896 to 1898, 32.8 per cent. reacted. An examination of 20,930 cattle in Great Britain, either slaughtered and examined post-mortem or tested with tuberculin, showed 5,441, or 26 per cent., affected with tuberculosis. Mac Fadyean estimates that 30 per cent. of the cows in Great Britain are tuberculous. A summary of the statistics, as presented by Russell and Hastings, of the Wisconsin Agricultural Experiment Station, relative to tests for tuberculosis in cattle in the United States, shows the following results:

States.	Number Tested.	Per Cent. Tubercular.
Vermont.....	60,000	3.9
Massachusetts.....	24,685	50.0
Connecticut.....	6,300	14.2
New York, 1894.....	947	6.9
New York, 1897-98.....	1,200	18.4

Pennsylvania.....	34,000	14.1
New Jersey.....	2,500	21.4
Illinois, 1887-98.....	920	12.0
Illinois, 1899.....	3,665	15.32
Michigan.....	18.0
Minnesota.....	3,430	11.1
Iowa.....	837	13.8
Ex. Station tests — suspected		
herds.....	323	39.6
Ex. Station tests, non-suspected		
herds.....	935	9.0

It is comforting to be able to state that in the year 1900, under Federal inspection, out of 4,841,166 cattle slaughtered, but 5,279, or only 0.11 per cent., were found to be sufficiently tuberculous to cause condemnation, thus showing that our beef cattle, as they come to the large packing houses, are yet comparatively free from tuberculosis.

Statistics from all countries goes to show that the percentage of swine tuberculosis increases as the disease becomes more prevalent in beef and milk producing animals, and this fact should cause great concern from a public health standpoint, aside and irrespective of the question of the direct communicability of tuberculosis from animal to man.

We may often find mixed infection, with elevated temperature, the formation of pus in various parts of the body of affected animals, particularly in the mammary glands, and in many instances a considerable development of toxins. Unquestionably the flesh of such animals must be affected in the same manner as is that of animals affected with other fevers and septic conditions. If we have extensive development of tubercular lesions in the udder, the secretion of milk must necessarily be affected. Its composition is changed, and we have present the tubercle bacillus, frequently associated with streptococci and staphylococci. This character of food must be a menace to the consumer, especially to young children, these toxins producing stomach, diarrheal and other disturbances. Reasoning on this theory, is it not perfectly possible that tuberculosis can be transmitted to the human family through the medium of both meat and milk coming from tuberculous animals?

While we all recognize the worth of any statement coming from that most eminent scientist, Koch, yet may not his utterances on this subject have been premature and radical? He maintains "that human tuberculosis differs from bovine tuberculosis and can not be transmitted to cattle; and also that mankind is nearly, if not abso-

lutely, insusceptible to bovine tuberculosis." While neither of these assumptions were original with Koch, yet he was the first man of any scientific standing to publicly indulge in such statements. Sidney Martin demonstrated in 1865 that sputa from man was far less virulent for animals than was bovine tubercular material.

Theobald Smith, Dinwiddie and Frothingham further demonstrated the conclusions of Martin. But none of these authorities and investigators went further than to say that human tuberculosis was communicated to cattle with difficulty, and if communicated it remained localized.

Martin fed human sputum to six calves, two of which showed no lesions, one had fifty-three, one had sixty-three and two had thirteen tubercular nodules respectively, in the intestines. Smith also produced, in like experiments, small lesions in some animals. Chauveau infected three animals with emulsions made from tuberculous human lungs. One of these animals was slaughtered and subjected to post-mortem examination fifty-seven days later, and was shown to have more than two hundred tubercles of various sizes in the small intestine. The cecum, colon, liver and peritoneum all showed tubercles. In one of these animals, while the abdominal lesions were slight, the right submaxillary gland and the two retropharyngeal glands were visibly affected with typical tubercular infiltration. The lungs in this animal showed not less than twelve large tuberculous centers and accompanying tubercular infiltration. One of the animals showed on post-mortem examination, on the thirty-fourth day after infection, a visible tuberculous eruption in the small intestine, and on the Peyer's Patches confluent tubercles were found. The left lung was nodular. Small tubercular aggregations were found in the larynx and upper portion of the trachea, with some ulcerations. This same experimenter made comparative experiments by intravenous injection and subcutaneous inoculation, the results of which led him to conclude "that the human tuberculous virus acts on the bovine species exactly as does the tubercular virus which is derived from the bovine species."

It is now an established fact that tuberculin made from human bacilli causes a reaction in cattle affected with bovine tuberculosis.

State authorities all over the United States obtain this character of tuberculin to be used for diagnosing tuberculosis in cattle, and it has been found perfectly satisfactory and effective for this purpose.

It has been demonstrated over and over again that bovine tuberculosis is communicable to horses, cattle, sheep, swine, dogs, cats,

monkeys, guinea pigs, rabbits and other animals, which goes to show a very extensive range of pathogenic power.

Ravenel, Pfeiffer, Hartzell and others of like experience have reported quite a number of accidental inoculations of man with bovine tuberculosis in the persons of veterinary surgeons while engaged in autopsies on tuberculous animals. Grotham reports a most interesting case of primary subcutaneous tuberculosis occurring in a six-year old girl, caused by the topical application of cream for an eruption on the leg.

After this treatment an ulcer possibly the size of a silver quarter was discovered on the posterior aspect of the leg, which had the characteristic appearance of a tubercular ulcer, and in near proximity were found a number of light mahogany colored spots. The animal from which the cream came was examined, and the udder found to be apparently normal, inguinal and intraperitoneal inoculation of two rabbits with a mixture of milk and cream from this cow gave positive results in both inguinal inoculations and one peritoneal. Caseous material from the girl's leg injected into the peritoneum of a rabbit produced tuberculous peritonitis, causing the death of the rabbit in about twenty-one days. A very similar case is reported by Coppez and also by Preister.

Instances innumerable could be cited, if space permitted, further demonstrating the susceptibility of man to infection by bovine bacilli inoculated into the skin or subcutaneously, many of which produced not only localized lesions, but generalized tuberculosis, ending in death.

The clinical evidences of the transmission of tuberculosis through the medium of milk are abundant, and well authenticated by some of the most scientific investigators of this day. The alimentary tract appears to be a more favorable route of entrance for the human bacillus than is the skin, and it is, therefore, reasonable to conclude that if bovine bacillus enters the body by means of skin inoculation, there is a still greater reason to believe that it enters also by way of the alimentary tract. That tuberculosis has been caused by the ingestion of milk from tuberculous cows there can now be no question, as clinical evidences of individual infection by the use of milk and carefully collected statistics showing the frequency of abdominal tuberculosis abundantly established. Demme reports the death of four infants, the offspring of healthy parents, occurring in the Hospital Jenner, from intestinal and mesenteric tuberculosis as the result of drinking unsterilized milk from tuberculous cows.

Law quotes a case where a strong, healthy boy of one and one half years, who drank milk from a cow which was shortly afterward killed and found to have had a generalized tuberculosis. In three months afterward the child died with abdominal tuberculosis. Gosse, of Geneva, lost a daughter from intestinal tuberculosis. This girl had drank milk coming from five cows. Four out of these five cows reacted to tuberculin, and upon being slaughtered were found to have tuberculosis, two of which cows showed tubercular disease of the udder. Broudel cites a case where five out of fourteen young girls in a boarding school became consumptive subsequent to the daily use of milk from a consumptive cow.

Dr. Stang, of Amorbach, reports a case of a five-year old boy, with no hereditary taint, who died with miliary tuberculosis of the lungs and enormously enlarged tubercular mesenteric glands, who drank milk from a cow which was found upon post-mortem to have had tuberculosis.

At North Hadley, Mass., a boy twenty months old died from abdominal tuberculosis, three months after having used milk from a cow for a week while on a visit. The cow was slaughtered, and proved to have generalized tuberculosis. At Yonkers a four-year old boy died of tubercular meningitis, and the two Alderney cows which supplied him milk were proved tuberculous by the tuberculin and post-mortem examination. Von Ruck was called in consultation to see a male thirty-three years old, with supposed typhoid infection. He diagnosed the case as one of acute miliary tuberculosis, and after death the autopsy showed the dissemination of the tubercular process. In a short while he was called to see the one-year old child of the deceased, and found it with fever and diarrhea, finally resulting in tubercular meningitis. Infection from the father was next to impossible, as the child had been removed from the house early in the sickness of the father. Both father and child had used the milk from a Jersey cow freely. An examination of one of the cow's teats showed a hard irregular lump, and also a similar lump on the udder. The animal was killed, and there were found extensive tuberculosis of the lungs and peritoneal cavity, and the lump in the udder revealed a caseous center, which on examination showed numerous well-stained tubercle bacilli. None of these cases reported were inclined to tuberculosis by hereditary taint, so far as careful investigation went. Thorne shows from the statistics of England and Wales that between the period of 1851-1860 and 1891-1895 there has been a reduction of the mortality

at all ages from phthisis of 45.4 per cent., while from all forms of tuberculosis the reduction has been distinctly less, namely, 39.1 per cent. Taking that form of disease registered under the name of *tabes mesenterica*, the reduction at all ages has been but 8 per cent.; while under one year of age there has been an actual increase of 27.7 per cent. As this is the milk drinking age these figures are very significant. In 769 autopsies on children under twelve years of age held by Still 269 showed tuberculous lesions. In these cases the primary infection was found to be as follows: Lung, 105; intestine, 53; ear, 9; bones or joints, 5—thus showing the intestinal infections were to the others as 1 to 2-1. Shennon, Edingburgh, in 355 cases of tuberculosis autopsies, was enabled to determine the channel of infection in 331; 67.7 per cent. of these cases were found to be respiratory, and 28.1 alimentary, or 1 to 2.3. Hospital statistics obtained from English sources go to show that in London nearly one-third of the child mortality is attributable to tuberculosis, and this may reasonably be accepted as being fairly representative with the results obtained by post-mortem examinations elsewhere. Northrup refers to 125 post-mortems at the New York Foundling Asylum on tuberculous children, in 34 of which the bronchial nodes were large and cherry; also the mesenteric nodes; the lungs contained tubercles, as did the liver, spleen, kidneys and meninges. Bollinger, in his address at the International Tuberculosis Congress at Berlin, in 1899, quoted with approval the autopsies by Heller of 248 tuberculous children, which showed in 45.5 per cent. of the cases tuberculosis of the mesenteric glands. From these it was concluded that milk played a leading role in the so-called transmitted tuberculosis of children. In this country we have less tuberculosis in cattle than in some foreign countries, and besides we have efficient Federal and local inspection, especially in distributing centers.

However, this inspection does not apply, most unfortunately, to dairy cattle. In Norway, Sweden, Finland and Lapland, where the milk from reindeer is used, tuberculosis is rare, while on the contrary, in Italy and Ireland, where the milk supply comes from domesticated cattle, consumption is much more prevalent. With the testimony of such scientific men as Demme, Law, Gosse, Brouerd, Creighton and many other men of like attainments and experience in this department of medical science, all go to show, as does also the statistics gathered from various sources and herein given, taken together, to my mind establishes the contention that tuberculosis may be transmitted to man

through milk coming from tuberculous cows. Admitting this to be a recognized statement of fact, what should be done in the premises? The British Congress on Tuberculosis not only declined to accept the doctrines promulgated by Koch in this matter, but declared that "medical officers of health should continue to use all power at their disposal, and relax no effort to prevent the spread of tuberculosis by milk and meat."

Investigators will continue in exhaustive, labored work, and their efforts will surely eventuate in much more certain and positive knowledge on this subject. In some few of the States in this country the tuberculin test for determining the presence of consumption in dairy cattle is being required and practiced. Statistics show that two-thirds of all the children in this country under the age of one year, at a time when resisting powers are feeble, are artificially fed. How important, then, that the dairy supply of milk should come from animals known to be free from tuberculosis, which can be definitely determined by the tuberculin test. The health officer of this city has for the past several years urged the importance of the enactment of a law requiring this regulation, and in his last annual report the following language on this subject was used in part: "Ultimately no milk will be sold in the city of Louisville which does not come from dairy animals which have been subjected to the tuberculin test, to determine whether said animals are perfectly free from tuberculosis, and those dairymen who first anticipate this requirement will profit no little by increased trade resulting from this forethought." This requirement will be demanded by even the consumer, sooner or later, as it will become known, as a result of scientific investigation and general experience, that the relation existing between milk and infectious diseases is being more conclusively demonstrated day by day. For obvious reasons an attempt at the enforced application of the tuberculin reaction would meet with strenuous opposition on the part of dairymen, yet this procedure represents the only reliable test, and I know of none other the employment of which would secure an absolutely tubercle-free milk supply.

The ordinance regulations governing the milk supply of this city now require quarterly examinations of all dairy cattle by competent veterinary surgeons, who are required to furnish certificates showing the physical condition of cattle examined, condition of stables, character of food and water supply, etc., but does not require the tuberculin test, as should be done under statutory law. The writer of

this paper, prompted by an intense desire to perform his official duty as Commissioner to Lakeland Asylum, and with the view of protecting the helpless inmates thereof, about one year ago, introduced a resolution that the herd of sixty-three cows furnishing milk to that institution, should be tuberculin tested, to determine the possible presence of consumption. This resolution was unanimously adopted, and the author thereof was appointed a committee of one, with full authority in the premises. Upon consultation with the State and County Board of Health, it was decided to employ the State Veterinarian, Dr. Frank Eisenman, to apply the tuberculin test to this dairy herd, which was done, with the following results:

In April, 1903 sixty-two head were tested, and twenty-nine of these reacted, showing a percentage of $46\frac{3}{4}$. In October following sixty head were again tested, twenty-four reacting, or a percentage of forty.

In December following fifty-six were tested, seventeen reacting, or a percentage of $30\frac{1}{3}$.

The cattle which reacted in April were tagged, but unfortunately most of these tags were lost, and no value of any significance can be placed on this test in comparison with those made in October and December. The cattle tagged in October were kept in strict account, and their conditions were compared with the December test. In the December test seventeen reacted that had previously reacted in October. This number is unusually large, for it is a matter of fact that cattle having once reacted to the test can not be retested with any degree of accuracy within a period of one year. In summarizing the three different tests, we find that sixty-two head were tested, thirty-nine of which reacted, or a total of 63 per cent. While this percentage is extremely large, it by no means equals the percentage of other herds found to be infected, many of which have gone as high as 90 to 95 per cent., where the disease was not even suspected.

The thirty-nine head which reacted were slaughtered, and submitted to post-mortem examination in the presence of a number of veterinarians and Federal Inspectors. Only four were allowed to pass for beef purposes.

The post-mortem appearance of most of the cattle was a revelation in pathological lesions, as the pictures I herewith present will show.

While most of the lesions were in the lungs, in three or four cases there was a general invasion of tubercles in the mesentery, bowels and mammary glands.

Cow tagged No. 46 (lung)—This picture shows tubercles scattered throughout the lungs, ranging from the size of a pea up to that of a walnut. Cross section of this tuberculous mass shows abundant thick creamy pus, which on evacuation showed a cavity in the center. A well marked capsule enclosed the whole.

Picture No. 10 (lung)—This picture shows very large bronchial glands about one and one-half inches wide, one and one-half inches thick, and two or three inches long. Cross section of these glands showed slightly yellowish surface, with calcareous particles scattered throughout the mass, giving a gritty sensation on cutting. Tubercles about the size of a buckshot were thickly scattered throughout the lung.

Picture No. 6 (omentum)—This picture shows scattered thickly over the surface fleshy masses, pale red, slightly elevated, soft to touch, aggregated in places, forming irregular patches variously sized, from a split pea to thumb nail.

Picture No. 6 (carcass)—This picture shows general tuberculosis, especially marked in the peritoneum and pleura. The anterior portion of both lungs showed a large number of tubercle. The tubercle in this animal showed themselves in the production of grape-like masses hanging in festoons in the infested serous membrane. The abdominal muscles were also involved.

Picture No. 44 (lung)—This picture shows near trachea a very large caseous mass well encysted. Scattered elsewhere are smaller masses, mostly about the size of a pea.

Picture No. 9 (liver)—This picture shows unusually large liver, and uniformly fibrous in character. On its upper surface yellowish white, bulging convex area, about four inches in diameter, which on cross section showed puriform contents.

Picture No. 15 (spleen)—Size normal, miliary tubercles scattered over the surface.

Picture No. 37 (spleen)—Shows normal shape and consistency, very broad thickened extremity, which is richly covered with tubercles, the other portion having tubercles scattered widely.

Enough pictures have been exhibited to demonstrate the diseased conditions found in these post-mortems. Dr. Vernon Robins, of the City Health Department, made an examination of the milk coming from these slaughtered animals, with the following results.

Milk from Nos. 5, 6 and 44 showed tubercle bacilli.

Milk from Nos. 7, 8, 9, 10, 13, 22, 32 and 43 showed no tubercle bacilli.

In his further examinations he found that No. 10 showed tubercle bacilli in the caseous bronchial glands. No. 46 showed tubercle bacilli in the lung, and No. 6 showed tubercle bacilli in the pleura. Most of the animals reacting showing glands of the lymphatic system markedly diseased, presenting the gross anatomical appearance of tubercular infection.

It should be stated that this herd of animals were in splendid physical condition in so far as appearances were concerned, as the pictures of a few herewith presented, which were taken prior to slaughter, will show.

As this was the pioneer work of this character suggested and carried out in this section of the country, it was criticized by some, and its value doubted by even the officials of the asylum, as they were not prepared for such an advanced step in the way of prophylaxis.

The alarming conditions revealed in the examination of this herd, where there was no suspicion of tuberculosis, makes it very apparent to my mind that it was a wise, humane move, and establishes most conclusively that it is of the utmost importance to apply the tuberculin test to all cattle supplying milk to the city of Louisville, and it is to be hoped this may ultimately be accomplished, in order that our people may be protected against the possibility of tuberculosis from this source.

Progress of Medical and Surgical Science.

Argyrol.—So many new remedies of more or less doubtful worth are brought to the notice of the medical profession, only to fall into merited oblivion, that it is with satisfaction that we can attest the value of argyrol (silver vitellin). The claims made for this organic silver preparation have, after thorough trial, been found to be based upon solid foundation, and to a large extent argyrol has supplanted nitrate of silver solutions in the hands of careful and conservative ophthalmic surgeons.

In recent years several new remedies have appeared, said to possess the valuable qualities of silver nitrate without its irritating and caustic properties; among these being argentamin, argonin, itrol, albargin, largin and protargol. But in argyrol we seem to have the best organic silver compound yet proposed. Used in from 10 to 25 per cent. strength, it is an excellent antiseptic and astringent, possessing great penetrating power, and absolutely harmless, even when dropped upon the ulcerated surface of the cornea. Used in genito-urinary diseases, it has been found extremely valuable in the forms of purulent conjunctivitis due to the gonococcus, and has become the routine therapeutic agent in many institutions for the treatment of ophthalmia neonatorum. In addition to constant irritation of the conjunctiva with some mild form of boric acid or saline lotion, the eyes of infants showing purulent conjunctival secretion are kept stained with argyrol solution, 25 per cent. strength, dropped between the separated lids every two or three hours by the nurse in charge. Under its use, corneal complications are extremely rare, and the purulent secretions are rapidly modified as the gonococcus disappears.

In affections of the lachrymo-nasal duct, accompanied by stenosis and muco secretion, argyrol has proved of great benefit. After the probe has been passed into the duct, 2.10 to 20 per cent. argyrol solution is freely syringed into the nose. No other remedy has given such satisfactory results in this obstinate and discouraging type of disease.

Argyrol will be found to meet the indication in the treatment of catarrhal and purulent forms of conjunctivitis, acute and chronic forms of dacryocystitis, corneal ulceration, especially when secondary to

affection of the conjunctiva; in short, whenever a potent antiseptic and astringent remedy is indicated.—*The Therapeutic Review*, May, 1904.

The Relation of the Pancreas to Diabetes and the Question of the Transplantation of That Gland as a Remedy for the Disease.—J. W. Allan calls attention to the following facts: 1. It is well known that total extirpation of the pancreas induces diabetes. 2. If only a portion of the pancreas is left—even the splenic end—no diabetes occurs. 3. If pancreas is transplanted into an animal before its own pancreas is cut out, no diabetes takes place. If the graft is removed diabetes occurs. 4. From 2 and 3 it is evident that the prevention of glycosuria is not due to the ordinary secretion of the pancreas, which flows into the duodenum by the duct of Wirsung. 5. It is reasonable to assume that the organ produces an internal sugar-destroying secretion, and that the portion of gland left (2) or the transplanted gland (3) has the power of forming that sugar-destroying secretion or juice. 6. From the foregoing it might, therefore, be hoped that by transplantation of pancreas a case of diabetes might be cured or relieved. 7. Again, turning to the pathological aspect of the question, we find that disease of the pancreas is frequently associated with diabetes, as is shown post-mortem. This is well known, and it is, perhaps, unnecessary to cite particular instances. 8. But it must be admitted that there are many cases of diabetes in which no disease of the pancreas is detected. How are we to explain these cases? In the first place, a naked eye examination may fail to reveal changes in the organ, and it may be hastily pronounced “normal” or “healthy.” But the real question is, has the gland been subjected to a careful and microscopic examination by a skilled observer, and does that examination show the islands of Langerhaus to be in a health condition? For in those islands the sugar-destroying ferment, the “internal secretion,” is produced. From the results of thymoid transplantation in myxœdema, Allan believes that that of the pancreas in diabetes is reasonable and justifiable. Internal administration of pancreatic preparations has been disappointing. He says that if he had a case of diabetes which did not respond to dietetic or drug treatment, and was drifting within the range of diabetic coma, he should be willing to assume the responsibility of advising transplantation of pancreas on the following conditions: (1.) That after full and honest explanation of pros and cons the patient requested that the operation shall be performed; (2) that the patient

was not suffering from acetonuria at the time; and (3) that a sheep should be killed close to or in the place of operation, and its pancreas directly conveyed to the body of the patient.—*Medical Record*, May 28, 1904.

The Result of Ligation of the Femoral Vein Below Poupart's Ligament.—Halberstædter calls attention to the fact that while in some cases of ligation of the femoral vein close below Poupart's ligament this operation is not followed by any special disturbance, in others it causes severe disturbance of circulation, even of gangrene. In fifty-four cases collected by him of ligation of the vein gangrene occurred twice. When the artery and vein were ligated simultaneously gangrene was observed in fourteen out of twenty-four cases.

Finally, while removing a tumor, after being compelled to resect a portion of the femoral vein and seeing septic gangrene of the extremity follow, Halberstædter attempted by experimentation to ascertain the reason why the femoral ligation was followed by so different results in different cases. He found that the restoration of the circulation depended on the amount of blood pressure, the function of the valves, and finally on the extent of previous ligation of veins in separate tracts.

In consequence of such investigation Halberstædter concludes that in cases where the femoral vein is injured the method of controlling the hemorrhage should be selected which preserves the lumen of the vessel, indeed lateral closure, and best by venous suture. When operating for the removal of tumors the femoral vein is enveloped in a neoplasm, Halberstædter advises to save as much as possible of the vein trunk, and especially of its lateral branches. The surgeon must under all circumstances make every effort to save the femoral artery. The most careful antisepsis must be observed, and all hemorrhage entirely controlled in order to avoid extravasation into the cellular tissue. When the artery is saved and the blood pressure good, the limb should be elevated after the operation. Under conditions of lowered pressure or simultaneous ligation of the artery, the elevation of the limb is contraindicated.—*Boston Medical and Surgical Journal*, May 26, 1904.

Retrouterine Hematocele.—Gayler gives the results in Doderlein's clinic in the management of these conditions, having re-examined thirty-six cases. In eighteen a laparotomy had been performed; one patient died of sepsis, fifteen were absolutely well at the end of four years, and two still complained of pain and discomfort. The average

time of recovery in the fifteen was six weeks. The three who had been operated on by way of the vagina were absolutely well. Conservative treatment consisted in rest in bed, liquid diet and application of warmth to the abdomen. Only thirteen of the fifteen thus treated responded to the request for re-examination. Eleven were free from their complaints, and showed no abnormalities on internal examination. He thinks these observations teach that a patient should be given in case of hematocele three weeks of conservative treatment in an institution where surgical interference is always conveniently at hand. Of course, in interrupted extra-uterine pregnancy, operation should be performed at once.—*The Journal of the American Medical Association.*

The Use of Silver Nitrate in the Eyes of New Born Children.—

Bischoff (*Zentralblatt für Gynäkologie*, No. X., 1903) has an interesting article on this subject, and in one hundred cases reports his investigations with a 2 per cent. silver nitrate solution in the eyes of new born children. The author states that the efficacy and remote effect of this drug are still in dispute, although it is nearly twenty years since Crede discovered that a 2 per cent. solution of silver nitrate acted as a prophylactic against ophthalmia neonatorum.

Cramer (*Archiv für Gynäkologie*, Band LIX) is cited as opposing the use of silver nitrate, for in 50 per cent. of his cases he got a severe conjunctivitis, which often resulted in a secondary catarrh. Cramer's results differ from those of Engleman, Leopold and others, who always employ a 2 per cent. silver nitrate solution as a routine prophylactic against gonorrheal ophthalmia of the new born.

Bischoff, in his investigations, used a 2 per cent. silver nitrate solution, and reports only a slight deleterious reaction from its employment. Secondary catarrh did not result in a single case. When a slight secretion was present, the eyes were carefully wiped out twice a day, as Bischoff contends that other manipulations are both injurious and superfluous. Mothers and attending nurses should be warned not to wipe out the child's eyes every time a slight secretion appears, as a troublesome conjunctivitis often results from these repeated manipulations. The author is of the opinion that the feebleness of the child, tedious and prolonged labor, and operative interference have no effect whatsoever on the later appearance of a conjunctivitis.

Silver acetate (1 per cent. solution) and protargol have been recommended as substitutes for silver nitrate. Good results have also been obtained by Leopold, Runge and Gusserow, with a 1 per cent. silver nitrate solution.—*The Physician and Surgeon*, April, 1904.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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Editorial.

ADMINISTRATION OF ETHER WITH REFERENCE TO THE PRIMARY STAGE.

Recently the writer has heard in discussion the expression of experienced operators that their preference for chloroform over ether was simply the ease with which it can be given, especially in the primary stage. That ether, in the beginning, had to be given by overwhelming the patient. This is a serious error, and in the early stage the writer has seen time and time again serious situations arise by just such improper methods in ether administration. This is especially the case with children and young people of a very timid disposition. This method of slapping an inhaler over the patient's face and suffocating him into insensibility is responsible for the accidents that occur so frequently in the early stages of anesthesia. It is quite as easy to get a patient under the influence of ether as chloroform by holding the inhaler above the patient's face and gradually lowering it. By this

method all nervous shock is avoided, and the patient goes under without struggling, and without the cyanoses that usually attends the method of half suffocating the patient, which method the writer thought was or at least should be obsolete.

CATHETERIZATION OF THE URETER.*

The following editorial is timely, and by careful study of the work referred to therein will save many serious errors :

The danger attending indiscriminate catheterization of the ureter in women as practiced in the clinics at the present time is forcibly presented to us in a recent article on urinary tuberculosis by Hunner. He shows that given bacteria in the bladder, as in the case of urinary tuberculosis, and the trauma which of necessity attends the passage of a ureteral catheter, be the catheter ever so deftly introduced, we have present two important factors in the causation of infection of the ureter and kidney. Furthermore, in bladder tuberculosis in a cachectic patient it has been determined that when the woman is placed in the knee chest posture and air is admitted to the bladder through a cystoscope the ureteral orifices are apt to gape on the sound as well as the diseased side, and thus permit the entrance of air together with bladder contents into the ureters.

Bearing on this point are to be considered the researches of the resident gynecologist of the Johns-Hopkins Hospital. He instituted a series of experiments and a cystoscopic study of the ureteral orifices in women, because it had been found that implantation of the ureter in the bladder after resection of the ureter in cases of advanced uterine cancer, was almost invariably followed by infection of the kidney belonging to the implanted ureter. According to these experiments renal infection is most often produced by the passage of micro-organisms from the bladder up to the lumen of the ureter, and this passage of bacteria takes place under ordinary conditions only when there is present some injury to the vesical end of the ureter thereby preventing the valve-like portion of the vesical wall at this situation from maintaining the ureteral canal in a state of closure.

If, as would appear to be the case, urinary tuberculosis is almost invariably primary in the kidney, and in its early stages, at least, confined to one kidney, the physician should be able to make a diagnosis

without catheterizing the ureters. A history of pain in the back, side or inguinal region, together with a disturbance of bladder function, having led to a suspicion of some kidney disease, physical examination shows the kidney usually palpable and tender, and palpation over the course of the ureter as it crosses the brim of the pelvis elicits tenderness and a desire to void urine. Through the vagina the thickened bladder or the tender utero-vesical region is palpated, and the thickened ureter can nearly always be felt at its vesical junction just anterior to the cervix, and through the rectum it may be felt coursing outward and backward. A systematic search for tubercle bacilli in the urine, examining one or two slides a day for a week instead of many slides from one specimen as so often done, will verify the diagnosis.

If cystoscopy is resorted to it should be done with the patient in the elevated dorsal position. It is not necessary to catheterize the ureter on the supposedly sound side. Urine enough for microscopic examination and for an estimation of urea may be obtained from this side by inserting a ureteral catheter in the ureter of the diseased side and while it is in place washing out the bladder and then collecting the bladder urine. Suitable allowance can be made for the contamination from the bladder.

The danger which attends infection of a sound ureter and kidney in the case of urinary tuberculosis applies to other diseases in which the bladder is teeming with bacteria, so that too great care can not be exercised in selecting cases for ureteral catheterization.

* Boston Medical and Surgical Journal.

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Regular meeting at Seelbach's Hotel, May 24, 1904, with Dr. M. K. Allen as host, presided over by the President, Dr. J. W. Irwin.

APPENDICITIS.

Dr. Argus D. Willmoth: Mr. S., age fifteen, was seen by me on the evening of the 17th, suffering with slight pain in right side over region of appendix, which, according to his statement, was noticed about midnight the night before, or about eighteen hours before I was called. His condition when seen was as follows: Temperature normal, pulse 66, no rigidity of muscles of abdomen, slight tenderness in region of appendix, no distension, bowels had moved freely the day before, kidneys moving free, slight nausea once during the forenoon after patient had ate a piece of toast. Hot turpentine stupes had been tried until the side was blistered and no relief obtained, when they were discarded and cold applications used instead. These were ordered continued, and everything withheld from the boy in the way of food and drink. Bowels washed out by high enemas, and the diagnosis of appendicitis made, and the family so advised, and the best thing was to operate. This the family would not agree to have done that night, but promised to have done if the patient was no better by the next morning. Patient was seen again about 7 o'clock the next morning, when he had a temperature of 100°, pulse 80; abdomen still soft and no distension, and only slightly tender over the appendix. An operation was again proposed, and his parents agreed to allow it performed if he was not better by noon.

The application of hot hop poultices rung from turpentine solution, one drachm to quart, was advised, and all food and drink still withheld. He was again seen at noon, or thirty-six hours from beginning of attack, at which time he was much better. Pulse 70, temperature 95.5. Pain gone, and also most of the tenderness. He was doing so well that it was thought best to allow him to continue, and operate in the interval. He was now given liquid food every four hours and local treatment discontinued. The symptoms did not change materially for the next twenty-four hours, the temperature ranging from 99.5° to

100.5°, pulse being never higher than 84. At the expiration of this time he had an acute pain which lasted only for a few minutes, but as the fever had never entirely gone, and the patient was not considered doing well, I decided to operate at once, fearing that I had a low form of the disease to contend with, and possibly a gangrenous appendix already to deal with, so he was moved to the infirmary and operated on at about the seventieth hour after the beginning of the attack. On opening the abdomen the appendix was found buried beneath the head of the colon and glued to the iliacus muscle, and was gangrenous near the attachment to the head of the gut. On trying to deliver the head of the colon the appendix ruptured, and pus and fecal matter poured into the field of operation. This was mopped out, and the operative field was coffer-dammed off with gauze, and the appendix ligated near the end of the gut and the free end removed. Ample drainage was provided for by a cigarette, a rubber tube and gauze drain. The wound was closed by through and through silkworm sutures. The drain was removed by piecemeal, and up to the present time the boy is doing well, and I anticipate no further trouble.

Dr. F. W. Samuel: This case proves what I have so often seen, that we can not depend upon the temperature in appendicitis cases to indicate the amount of destruction. I have seen a number of deaths where the temperature was under 100 and gangrenous conditions found at post-mortem. Even the pulse is not a safe guide.

In endo-appendicitis I base my opinion largely on the attack lasting forty-eight hours, at the end of which time the patient is usually convalescent. If all food be withheld and a purge given, they will usually convalesce and go on to the next attack. If the case is doing well and temperature and pulse near the normal, with no toxemia, we may be willing to wait. When a case lasts seventy-two hours, a time for interference must be expected.

In this case the appendix was outside of the caput coli, and was adherent to the iliac muscle. The adhesions made it difficult to remove, and in lifting the appendix out it gave away, and a teaspoonful of fecal matter escaped. These fecal fistulas usually close of themselves; I have had it happen a number of times. The only case of the kind that terminated fatally died of tuberculosis. He had a fecal fistula for two months, which I attempted to close by repeated operations.

Dr. Willmoth's case had a gangrenous spot, and I believe the patient would have lost his life if the appendix had not been removed

by a timely operation. I believe that when the diagnosis is made in the actual attack that then is the golden opportunity for surgical intervention. Unfortunately, however, we are denied this frequently by those in authority.

Dr. M. F. Coomes: I remember once being called to see an appendicitis case where the temperature was almost normal, and they decided to wait. I insisted upon operation, and the appendix was found to be on the verge of suppuration.

Dr. Hugh N. Leavell: In these gangrenous cases I have usually found intermittency of pulse, especially in adults, and this has been more important to me than the pulse rate. The pulse is almost invariably intermittent. This case bears out the argument that appendicitis is a surgical disease for which there is no medical treatment. The fact that the appendix lay posteriorly probably accounts for the lack of abdominal symptoms. I have been struck with the fewness of symptoms around the appendix with grave conditions within. Nature often tries to get the head of the colon in close proximity to the appendix and bury it. I think there is a time when all cases of appendicitis operated on will recover. If the case is doing well, we are justified in waiting until the interval.

Dr. J. W. Irwin: I have spoken and written from time to time on this subject, and have had under treatment as many as nine cases of appendicitis at one time. In the last thirty years I think I have seen as many as seven or eight hundred cases. I have but one death to report and that was during convalescence, and in a very bad subject forty-five years of age, who had drunk twenty-six barrels of whisky and had valvular disease of the heart.

Dr. Wilmoth has reported a case where surgery should intervene. The appendix evidently had poor blood supply, and became gangrenous. Wherever pus forms it should be let out, but it has been my fortune never to see this happen in my own practice. I have seen abscesses form in cases seen in consultation, and have advised operation.

The most dangerous cases are those with depressed temperature and evidence of shock to the nervous centers. I do not regard a temperature of 103° or 104° as so dangerous. In thirty years I have seen but two recurrences following convalescence. I have never met with a gangrenous appendix such as this; many of the cases of abscess seen in consultation had been treated with home remedies, and operation was demanded. I do not regard appendicitis as so dangerous to life as many do.

When a surgeon opens the abdomen of course he finds the appendix in an inflamed condition. But the same condition may be found in erysipelas of the ear, and no one would think of removing that organ. We may also make mistakes in diagnosis when there is other inflammatory condition around the caput coli. I think there are many cases of appendicitis where the surgeon should not interfere. Only in pus or gangrenous cases should he operate, and then he should do so early. The fulminative cases are the most dangerous. If we wait until all symptoms have subsided and there is still a tumor present, we should go on and treat the case for five or six weeks, and we will not have recurrence once in three hundred cases. It would be well if the surgeon would look into these cases from a different point of view. When surgeons can show a better series of results than by medical measures they may call it a surgical disease, but I defy them to show it—now.

Dr. Samuel: I have operated 103 times, with two deaths; these were cases of general peritonitis.

Dr. Willmoth (closing): I only wish to emphasize the fact that there were practically no symptoms, and he was not a sick boy. It seemed foolish when I first advised operation. My reason for so doing was the persistent temperature, which would not come below 99°. There was never any intermittency of pulse in the case.

X-RAY EXPERIENCES.

Dr. M. F. Coomes: I wish to report some X-ray experiences. The first case is that of a man of forty, with a typical epithelioma of the lower lid. I advised the X-ray to save deformity. I applied it for sixty days and it healed up. Then an ugly condition set up, and he went to Dr. Dunn. That was six months ago, and Dr. Dunn used the rays until the lower and part of the upper lid were destroyed, and there was a rapidly growing cancerous mass. A week ago I eviscerated the orbit, cut away the lids, and burnt the bone black with the Pacqueline cautery. It shows that sometimes the cases most favorable for operation prove most unfavorable.

The next case illustrates the opposite. This woman has a cancerous mass in both nostrils and involving the lower lip. A number of doctors had pronounced it epithelioma, and all the caustics except the Vienna paste have been used. It looked to me as if it ought to be cut away, except for the deformity. I told her I would try the X-rays, and she received twelve or fourteen sittings: it healed up and she has remained well ever since.

The third case is that of a doctor seventy years of age. He had had syphilis in his early life, and about eighteen months ago a sore appeared on his lower lip. He went to Senn, of Chicago, who sent him to Hyde, who made a section and said it was syphilis, and sent him to Hot Springs. He was treated there until his funds became exhausted, all without effect. When he came to me one-half of the lip presented the appearance of a non-malignant sore. I thought it an epithelioma, though it did not have the characteristic appearance. Many others were of the same opinion. I advised him to have it cut out, but he insisted on the X-rays. I gave Dr. John R. Wathen a section from the case without telling him the history, and he said it was syphilis. I gave him potash and used the rays, but he went from bad to worse. He went back to Senn, who said he was past redemption, and so said Pusey, Ochsner and others. Then he went to a quack, who burnt it with some paste, and now he is perfectly well.

I believe the majority of people who have used the X-rays have come to the conclusion that in all acute cases the knife should be used, because the rays seem to stimulate the growth. I think the first case reported should have been cut. The cases show how much we are in the dark on the subject. My plan is to cut away what I can and then use the rays.

Essay by Dr. M. K. Allen: "Can Bovine Tuberculosis be Transmitted to Man?" under original articles this issue.

DISCUSSION.

Dr. Hugh N. Leavell: It seems remarkable that so many of these cattle had infection of the udder, and these may be more competent to produce tuberculosis in man than cattle infected in other portions, who are also capable of producing the disease. We all know the importance of keeping wet nurses affected with tuberculosis away from babies, and certainly the milk from infected cows should not be used for infants. We ought to give Dr. Allen a rising vote of thanks for such a paper. It should be printed in both the medical and lay press of the world.

Dr. J. M. Morris: The question does not admit of discussion, for it has been proven by the science of the world. The paper proves that a large percentage of cows are affected, and the question is: How shall the matter be remedied? I believe that the time will come when the milk supply will be under legal control. The paper could not be improved upon.

Dr. J. A. Flexner: Dr. Allen's paper is practically an answer to his title. I believe that if less a man than Koch had perpetrated the

faux pas, the whole subject would have died a-borning. I do not know any other man whose dictum would have been seriously entertained, and the British Society itself did not really entertain it. Some of Koch's grounds, such as that of intestinal tuberculosis in infants, have already been proved to be unfounded. It has been proven that butchers contract tuberculosis from the carcasses of animals which they slaughter. Koch gave absolutely no credit to Thiebold Smith's work, who was the first in this country to call attention to the slight difference between the bovine and human tubercle bacillus. Experiments have since proven that the human tubercle bacillus will adapt itself to the animal. It is difficult to inoculate fowls, but if the bacilli be placed in a capsule and emplaced in the abdominal cavity, tuberculosis will be produced. The same is true of the fish and turtle. The culture from the turtle yields a tuberculin to which other animals will react, and it is a law that if an animal reacts to a serum there must be a close relationship between the two organisms, the one infecting the host and the test organism.

I do not believe there is a scientist of any note anywhere who accepts Koch's theory. His experiments were all too few in number to warrant a statement of such wide range.

The Pennsylvania Live Stock Commission has settled this question satisfactorily by paying the farmer for all animals slaughtered. The results show the wisdom of this plan. The State ought to pay for these cattle, for they are a menace to public health.

Dr. John R. Wathen: Dr. Allen has given us many points, and I believe his paper will bear good fruit. When Koch discovered the tubercle bacillus, he made a great step forward; when he followed this up with his opinion as regards the bovine tubercle bacillus, it was at first not accepted to a large extent.

The paper illustrates the point, often overlooked, that all these cattle are diseased; whether the bovine bacillus is the same as the human or not is a minor point. The point is that we should have healthy cattle for food. It may take years to settle the question whether the two bacilli are identical or related. I endorse all that was said about slaughter of the cattle, but it is too early to judge whether the great discoverer of the tubercle bacilli is correct or not.

Dr. E. S. Allen: I agree with the essayist that the bovine tubercle bacillus is of the same type as the human, and whatever change there may be in the morphology of the tubercle is due to environment.

Dr. Ewing Marshall: I am not a microscopist, and do not know

that I could tell the difference between human and bovine tuberculosis, if there be a difference. But that is a non-essential ; if the cattle are diseased, get rid of the cattle.

I have watched the discussion with reference to the establishment of these sanitorias for the benefit of the poor, and I question their advisability very much. To take a wretch from the slums, and send him to an institution with food and surroundings to which he is unaccustomed practically destroys his future usefulness, granting that the tuberculosis is cured. Send him back to the slums again and you kill him ; if he does not die, he will not be a useful laborer. Besides, you are taking him away from his family and robbing them of his earnings. I think the money better spent in colonizing these people on farms where the entire family can be transplanted.

Dr. P. F. Barbour : The paper opens up a question in which we are all interested, especially those who have to do with children. I agree that tuberculous cattle should not be used, though there are many questions yet unsettled. The paper shows undoubted cases of infection, but there are many men who take the opposite view. Holt reports an instance where a herd of Jersey cows furnished milk to a number of wealthy families, and there had been but one case of tuberculosis in the children in ten years. On examination 45 per cent of the herd were found tuberculous. It may be that the children did not get the tuberculosis from the cows, or that the environment developed their resisting power to a higher degree.

There is a second series of post-mortems made on children in orphan asylums. Out of a large number of cases there was an exceedingly small number where tuberculosis was found to be primarily in the intestine. Here, again, the milk in these institutions is usually Pasteurized. It has been shown that as children get older, the percentage of abdominal tuberculosis becomes greater.

I must agree with the essayist that if a tuberculous cow is found in the herd it should be excluded.

Dr. A. D. Willmoth : I think the laity should have this paper in their hands as well as the profession. People are looking to us for the prevention of disease as well as for its cure. Tuberculosis is spreading so rapidly that we should use every effort to stay its progress. People through the country and in the smaller towns do not understand the danger of infection in this way.

Dr. T. P. Satterwhite : When Dr. Allen introduced his resolution into the Lakeland Asylum Board, as a member of it I did all I could

to get it carried. The cows slaughtered were healthy looking specimens; whether they had tuberculosis or not I do not know, but were diseased; but Drs. Flexner and Wathen have struck the keynote that the public should be interested in, namely, that no diseased cattle should furnish the milk supply. The only way to control this matter is for the Legislature to pay the owners of the cattle, and until this is done the question can not be settled.

I doubt if there is a gentleman in this room who does not order milk for his patients without considering the importance of knowing whether it is from tuberculous cows. I do not give milk now as frequently as formerly, pure. We should not think of drinking milk from unhealthy cows any more than of eating other poisonous food. Every one should advocate the pure food bill which is up before Congress, and is in danger of defeat on account of liquor men.

Dr. W. H. Wathen: As science becomes more perfect through original investigation, we learn many things. We are reminded that there are many diseases latent in the body, unsuspected until demonstrated in necropsy. Since more than 90 per cent. of tubercular lesions have been demonstrated in necropsies, we are not able to say at present how much of the disease has been communicated from cattle. The disease may have been conveyed to the child by other means, and time must settle the question of its transmission.

We are also unable to note positively the conveyance to the child of the disease through the milk of the diseased mother. An argument against the conveyance through milk is the fact that there are 90 per cent. of people dying who are tuberculous, yet we see no tuberculosis in the children of this 90 per cent. of nursing mothers. While we are unable to define the relation between the human and bovine bacilli, we can say that the cattle are diseased and the milk should not be consumed. As one of the members of the County Board of Health I have co-operated in this matter. The difficulty lies in the getting the Legislature to pass bills to protect people from these products. This is the direction in which we must now work.

Dr. M. F. Coomes: I think there is very little danger in eating the meat of tuberculous cattle, because it is cooked. I should not hesitate to do so. I think it is reasonable to expect tuberculosis to develop in the udder. Next to the lung, the joints are the places where the nidus is most frequently found in the human, and the constant irritation of the cow's udder by milking probably accounts for it. The average lot of beef cattle are pushed and kept in a high state of

vitality, which is not the case with milk cows. Besides, the others have a wider range, and are more in the air and sunlight.

As to the sanitarium question, it has been my experience that a man who goes to these places and recovers should not return to his former home. Time and again have I seen them die quickly after their return.

Dr. J. W. Irwin: It has not been shown why so many people eat tuberculous meat and drink milk from tuberculous cows, and yet they do not die. It is known that you can take into the stomach the poison of hydrophobia and other kinds without being poisoned. It may be that the stomach also takes care of the tubercle bacilli. There have been a great many theories, but the paper has dealt largely with facts. There is one point of discrepancy: it is remarkable how few people die of consumption when we consider how many people eat the flesh and drink the milk of tuberculous cows. But none of us want to consume impure meat and milk, and we should seek to procure the passage of pure food laws. I think the contents of the bottle have more to do with the destruction of human life than the drinking of tuberculous milk.

Dr. Allen (closing): The paper was prepared with a view to protecting the health of the community, which is my life work. I beg to differ from many of the views advanced, but there is not time for argument. You gentlemen not engaged in public health work have little conception of the conditions of the milk supply of this city. Recently a gentleman had a valuable cow inoculated and she reacted, with a temperature of 105° . He sold her to another man, who put her in a herd, and supplied milk to the firm which supplies this city with cream. I notified the firm that unless the cow was excluded they could not send cream to the city, and a wordy war ensued. After a personal interview the firm had Dr. Harthill submit the whole herd to the tuberculin test, and none of them reacted. This cow did not react, for it is known that an animal will not react a second time within a year. The former owner of the cow purchased her back, and she was submitted to a post-mortem, and a large tuberculous abscess was found. So you see here was a medium through which the city of Louisville was being supplied with cream from a tuberculous animal, and yet you hear about the possibility of determining that an animal is diseased.

Notices.

**KENTUCKY DAY, JUNE 15th—THE OLD COMMONWEALTH
PROMISES TO SET A NEW STANDARD FOR
WORLD'S FAIR DAYS.**

The Kentucky Commission for the Louisiana Purchase Exposition has decided to postpone Kentucky Day from June 2d to June 15th, and active preparations to make the day one memorable in the history of the St. Louis World's Fair are now on. No printed invitations are to be sent into Kentucky. Every Kentuckian, from no matter what walk in life, is cordially invited to be present. The Kentucky Press Association will hold its annual meeting on Kentucky Day at the Kentucky Building on the Exposition grounds. This organization will meet first in Louisville on June 13th, leaving that night for the World's Fair City on a special train furnished by the Henderson route. On Tuesday, which is June 14th, the editors will do a little sight-seeing, and in the afternoon be entertained at the Woman's Magazine Building outside the grounds. On that night they will see "The Pike."

While the program for Kentucky Day is not complete, enough is known to announce that it will be full of interesting events. The Kentucky Building is to wear a gala attire, and brass band music from the outside and a string orchestra from the inside will give to the "New Kentucky Home" an attractive tone. The editors will hold an informal session at 10 o'clock in the morning, followed by a tour of the grounds on automobiles and on the Intramural System, winding up at 1 o'clock with a luncheon probably at the East Pavilion, which is being conducted by Mrs. Rorer, the famous cook-book woman. At 2 o'clock the regular Kentucky Day exercises will begin in Festival Hall, consisting of addresses by prominent Kentuckians and ex-Kentuckians. After the ceremonies a recital on the big pipe organ will take place. At night, in the Kentucky Building, there will be a reception from 8 to 11 o'clock. The invited guests outside of Kentucky will include the Exposition's social list, the Kentucky Society of St. Louis, and the delegates to the National T. P. A. Convention. On Thursday morning the Kentucky Commission will hold a business session, and on Thursday evening the Kentucky Society of St. Louis will entertain in the Kentucky Building in honor of the Commission.

MEDICAL INTERNE.—GOVERNMENT HOSPITAL FOR THE INSANE, JUNE 29-30, 1904.

The United States Civil Service Commission announces an examination on June 29-30, 1904, at the places mentioned in the accompanying list, to secure eligibles from which to make certification to fill at least two vacancies in the position of medical interne in the Government Hospital for the Insane, Washington, D. C., at \$600 per annum each, and other similar vacancies as they may occur in that hospital.

The examination will consist of the subjects mentioned below, weighted as indicated :

<i>Subjects.</i>	<i>Weights.</i>
1. Letter-writing (the subject matter on a topic relative to the practice of medicine).....	5
2. Anatomy and physiology (general questions on anatomy and physiology, and histologic or minute anatomy).....	15
3. Chemistry, materia medica and therapeutics (elementary questions in inorganic and organic chemistry ; the physiological action and therapeutic uses and doses of drugs).....	10
4. Surgery and surgical pathology (general surgery, surgical diagnosis ; the pathology of surgical diseases).....	20
5. General pathology and practice (the symptomatology, etiology, diagnosis, pathology, and treatment of disease).....	25
6. Bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis ; the application of hygienic methods in prophylaxis and treatment).....	10
7. Obstetrics and gynecology (the general practice of obstetrics ; diseases of women, their pathology, diagnosis, symptoms and treatment, medical and surgical).....	15
Total	100

Age limit, twenty years or over.

This examination is open to all citizens of the United States who comply with the requirements.

Applicants must be graduates of reputable medical colleges.

Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners at the places mentioned in the accompanying list, for application Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington prior to the hour of closing business on June 22, 1904. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

Issued May 27, 1904.

UNITED STATES CIVIL SERVICE COMMISSION, WASHINGTON, D. C.

The examination referred to in the accompanying newspaper announcement may be taken on the date mentioned therein at any of the places named below. No request will be granted for examination on any other date or at any other place. Application blanks may be secured from the secretary of the local board at any of the following named places : At places marked "C. H." applicants should apply at the custom-house ; at other places application should be made at the post-office :

ALABAMA.—Birmingham, Mobile, Montgomery.

ARIZONA.—Phoenix, Prescott, Tucson.

ARKANSAS.—Fort Smith, Little Rock, Texarkana.

CALIFORNIA.—Fresno, Los Angeles, Marysville, San Francisco.

COLORADO.—Denver, Durango, Grand Junction, Pueblo, Trinidad.

CONNECTICUT.—Hartford, Middletown.

DISTRICT OF COLUMBIA.—Washington.

FLORIDA.—Jacksonville, Key West, Pensacola, Tampa.

GEORGIA.—Athens, Atlanta, Augusta, Macon, Savannah, Thomasville.

HAWAII.—Honolulu, C. H.

IDAHO.—Boise, Moscow.

ILLINOIS.—Chicago, Peoria, Springfield.

INDIANA.—Evansville, Fort Wayne, Indianapolis, Lafayette.

INDIAN TERRITORY.—Ardmore, Muskogee, South McAlisterville.

IOWA.—Des Moines, Dubuque, Fort Madison, Iowa City, Mason City, Sioux City.

KANSAS.—Fort Scott, Salina, Topeka, Wichita.

KENTUCKY.—Lexington, Louisville, Paducah.

LOUISIANA.—Baton Rouge, New Orleans, C. H., Shreveport.

MAINE.—Bangor, Houlton, Machias, C. H., Portland.

MARYLAND.—Baltimore, Cumberland, Salisbury.

MASSACHUSETTS.—Boston, Greenfield, Springfield.

MICHIGAN.—Detroit, Grand Rapids, Manistee, Marquette, Saginaw, Sault Ste. Marie.

MINNESOTA.—Duluth, Mankato, St. Paul.

MISSISSIPPI.—Greenville, Meridian, Vicksburg.

MISSOURI.—Jefferson City, Kansas City, Kirksville, Springfield, St. Louis.

MONTANA.—Billings, Bozeman, Butte, Great Falls, Helena, Missoula.

NEBRASKA.—Grand Island, Lincoln, Omaha.

NEVADA.—Reno.

NEW HAMPSHIRE.—Claremont, Concord, Keene, Portsmouth.

NEW MEXICO.—Albuquerque, Las Vegas.

NEW YORK.—Albany, Buffalo, Ithaca, New York, Plattsburg, C. H., Rochester, Syracuse.

Utica.

NORTH CAROLINA.—Asheville, Charlotte, Raleigh, Wilmington.

NORTH DAKOTA.— Fargo, Grand Forks, Pembina, C. H.

OHIO.—Cincinnati, Cleveland, Columbus, Ironton, Toledo, Zanesville.

OKLAHOMA.—Enid, Guthrie, Oklahoma.

OREGON.—Astoria, Baker City, Eugene, Portland.

PENNSYLVANIA.—Belleville, Bethlehem, Harrisburg, Philadelphia, Pottsville, Warren,

Williamsport, Wilkesbarre.

Puerto Rico.—San Juan.

SOUTH CAROLINA.—Charleston, Columbia, Greenville.

SOUTH DAKOTA.—Aberdeen, Deadwood, Sioux Falls, Watertown.

TENNESSEE.—Bristol, Chattanooga, Knoxville, Memphis, Nashville.

TEXAS.—El Paso, Fort Worth, Houston, San Antonio, Waco.

UTAH.—Logan, Salt Lake City.

VERMONT.—Montpelier, Rutland, St. Johnsbury.

VIRGINIA.—Lynchburg, Norfolk, Richmond, Roanoke, Staunton.

WASHINGTON.—Tacoma, Port Townsend, C. H., Seattle, Spokane, Walla Walla, Whatcom.

WEST VIRGINIA.—Charleston, Fairmont, Parkersburg.

WISCONSIN.—Appleton, Ashland, Chippewa Falls, La Crosse, Madison, Montgomery.

Missouri.

WYOMING.—Cheyenne, Laramie.

Dr. Charles A. Oliver, of Philadelphia, Pa., has been chosen by the British Medical Association as its official guest from the United States for its seventy-second annual meeting, which is to take place in Oxford, England, in July. With him are associated Prof. Hirschburg, of Berlin, representing Germany, and Dr. Javal, of Paris, representing France.

During his stay Dr. Oliver will reside at Keble College as the personal guest of Mr. Robert Walter Boyne, the President of the Ophthalmological Section of the Association and Lecturer on Ophthalmology at Oxford University.

The clinics at Wills' Hospital, Philadelphia, will be formally opened to Professor Ramsay on the afternoons of the 13th and the 14th of June, immediately after the annual meeting of the American Medical Association at Atlantic City. A meeting of Wills' Hospital Ophthalmic Society will be held on the 13th of June, with an informal reception to Professor Ramsay by the attending surgeons to the hospital at the hospital after the meeting. Members of the regular profession are invited to attend.

On the 14th of June, after the special clinics in the afternoon, the assistant surgeons to the hospital will entertain Professor Ramsay by a visit to Willow Grove Park for supper, music and electric fountain display. Trolley cars will leave the hospital door at 5 o'clock. All visiting ophthalmologists are more than welcome to join in the party.

Professor A. Maitland Ramsay, M.D., of Glasgow, Scotland, the official guest of the American Medical Association, which meets at Atlantic City in June, will be the guest of Dr. Charles A. Oliver, of Philadelphia, while in that city.

The following was received June 3d by the editor and expresses itself: The trustees and faculty of the Medico-Chirurgical College cordially invite each member of the American Medical Association to visit the new hospital and laboratories, on Cherry street, between Seventeenth and Eighteenth streets, before or after the meeting of the Association in Atlantic City.

The Palace of Liberal Arts at the St. Louis Exposition affords an excellent and interesting exhibit of pharmaceutical and clinical displays. This has not been advertised very extensively, hence this notice.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

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No. 150.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

HYSTERIA, WITH REPORT OF CASES.*

BY JOHN E. KINCHELOE, M.D.

Realizing my inability to advance anything new, other than has already been advanced, as to the etiology of hysteria, and appreciating how uninteresting it is to have to listen to what has been, and can be, read from our text books, I only desire to go into the treatment of hysteria in a general way, and report a few cases, with results of treatment in my actual experience.

Hysteria requires more tact, perseverance, industry and self-control than any other disease in the domain of neurology. It is, taking it in its broad sense, a nerve disease, with a distinct neuropathic heritage as a predisposing cause, and psychical trauma and all things contributing to it as its most exciting factor. I believe that there is not a physician living who does not echo the sentiment of the man who once said, "May the Lord deliver me from the nervous woman." It can truthfully be said that there are no cases that give the doctor more worry and anxiety than does a nervous woman. She either walks on the mountain top of exaltation, or, unbefriended by mankind, she weeps solitary in the valley of darkness. She is, so to speak, a chronic constitutional sore, unaffected either by local soothing ointments or the most heroic systemic medication. She becomes such a torment

*Read before Society of Physicians and Surgeons, Louisville, Ky.

visitor to your office that by sound you know her approaching footsteps, or peculiar sigh or cough. She is always ready and willing to consume your leisure moments by describing her ailments and telling you that she does not feel as well as she did the day before, and that the last medicine does not seem to agree with her. When she leaves your office she starts out in search of friends who have the same affliction, and if, perchance, she finds friends suffering with another trouble, she comes back the next morning with that trouble in addition to her many others.

The general treatment of hysteria is not easily disposed of in a few paragraphs. The first most important step in the treatment of a hysterical patient is for the physician to gain the confidence of the patient and the co-operation of the family. In some of the severe forms it is almost necessary to place the patient in different environments, with total strangers. In a general way it may be said that for all hysterical phenomena cold water, in some way, is good treatment. This treatment serves for two purposes, acting as a tonic and as a sedative. It has been my experience that when you have one of these nervous women, who are not benefited by medicine, if you will put them on a cold water bath they will either get better under one bath or will call for the bath each day, it having such a sedative effect. I have several patients now who are nervous and can not sleep at night, the least excitement unnerves them. I have them night and morning to have some of the family dash a bucket of ice water down their spines. They will not do without it.

Electricity is another agent of very considerable value in the treatment of hysteria, the kind of electricity depending largely on the patient. Usually, it is either faradic or static. I think that this has a psychic as well as tonic effect. I am not able to speak of the efficaciousness of electricity in these cases from a standpoint of any considerable experience. As to medical treatment, in the cases I have had medicine seemed to have no effect at all. I think in some cases it does have a psychic effect; for example, the coloring of the urine by methylene blue. If the patient is anemic and in a generally impoverished condition, cod liver oil, iron, and such restoratives should be used. In the cases I have had I have used bromide and different sedatives with negative results. In treatment of the accompanying spasmodic seizures of hysteria, I think, while the hypodermic gives relief it is the most harmful thing we can do for hysterical patients. It causes them to fasten their minds more firmly upon themselves,

causing them to think that the doctor thinks there is something seriously wrong with them.

It has been my experience that you generally have to treat the family first. If you are successful with them, you will, in the same degree, be successful with your patient.

As to the surgical procedures, particularly in the generative organs, I think them unscientific, and, in my opinion, they can not be condemned in terms too strong.

CASE NO. I.—Miss T. age eighteen, was suffering from an extreme case of vomiting. When I first saw her she seemed to be completely exhausted. I gave her the usual gastric sedatives, with negative results. I had made several calls, and by this time had come to the conclusion that there was nothing seriously wrong with her. She would have what the family termed sinking spells, and would remain unconscious for a period of thirty minutes at a time. They kept calling on me to make long night rides to see her until I nerved myself up to the point of doing something desperate, if necessary, to stop the night rides. The last call that I made when I walked in the patient was just coming out from one of her sinking spells. The room was crowded with relatives and neighbors.

Her mother was stroking her forehead, saying, "Mamma's baby will not be with her long." Her sister was patting her on the cheek, saying, "Poor sister can not live much longer," etc.

She was a very timid and sensitive girl. Realizing this fact, I told her that I had come to see her have one of those fits that she was having for every one who came in. I told her that I meant no foolishness, but meant what I said—that I desired to get back home to get some sleep. It was but a few moments until she had one of them. She had nothing but a gown on; so I said over her that I did not care if she were a young girl, I would stand her up, as she would not know if she were being exposed. I stood her up in the tub myself, and had the ice water dashed down her spine. She shrieked like an Indian, and said that I would kill her. I put her back to bed, and in a few minutes she said: "Doctor, I am going to have another spell." I went through the same procedure again. The third time she said that she believed she was going to have another spell. I started to put her in the tub, but she said: "Please wait; I do not believe that I will have it." I waited, and she did not have it. She had been in bed

three weeks and got up the next morning. She has been well since that time.

CASE NO. II.—Miss C., aged thirty-eight, gave history of having been nervous all her life. I saw her one time only. She became unconscious while I was there from hearing a mouse running between the plastering. This young lady had a very beautiful suit of hair, and was very proud of it. I left her in this unconscious condition, giving directions to her mother in tones loud enough for the patient to hear if she wished, as follows: That if patient had another similar attack it would be necessary to cut her hair and shave her scalp and put a mush poultice on her head, as hot as she could stand it. This humiliation stopped her unconscious spells. She had had a number of these spells before I saw her.

CASE NO. III.—Mrs. B., aged twenty-eight. I was called in consultation with Drs. Milner and Parks. This lady had been bedfast for three weeks, having one convulsion after another, lapsing into unconsciousness for hours, and sometimes as much as three days at a time. They had tried everything conceivable in the way of medical remedies. Had given her apomorphia to its limit, with the bromides, etc. They had used cold water and ice packed to the spine, without arousing her from her unconscious state. The use of the thermocautery on each side of the spine, one time, relieved her.

CASE NO. IV.—Miss D., aged nineteen, was entertaining her gentleman friends on Sunday, and while at the dining table her mischievous little brother let a sonorous escape of intestinal flatus. The young lady suppressed her laughter until she could no longer endure it. She began to laugh and was unable to stop. About the middle of the afternoon her brother came in great excitement for me, saying that his sister was in a dangerous condition. When I reached her she was still laughing, almost convulsing. The family objected to any heroic treatment at all. I would consent to nothing but heroic treatment. At any rate I was discharged, and an old non-schooled man called in. The last that I heard of the girl she had had convulsions for about three weeks. I believe that she is well now.

INFLUENZA.

BY ORVILLE A. KENNEDY, B.S., M.D.

This city has just passed through one of the periodic epidemics of influenza or la grippe, which have appeared at irregular intervals for a number of years.

Of all the diseases with which we have to contend this disease is the most complex, baffling and changing in its manifestations, and while in itself not productive of a large mortality, having a death rate of less than one-fourth of 1 per cent., (1) it is a powerful factor in increasing the death rate, by its great influence inducing or precipitating other diseases of a grave nature. It is a disease, therefore, which in itself is not to be classed among the fatal maladies, but which is of equal gravity with these because of the great frequency of sequela which end fatally.

During the months in which this disease is prevailing the mortality of the city is greatly increased, but the deaths recorded from influenza are comparatively few, while those from tuberculosis, pneumonia, pleuro-pneumonia, bronchitis, etc., are greatly increased.

The visitations from this disease are always in the months included between the late fall and early spring, the epidemic reaching its height about the middle of this period.

The symptoms manifested in different epidemics vary greatly, but in every epidemic the pathognomonic symptom—great nervous prostration, lingering long after the acute symptoms have subsided, and the proneness to grave sequela have been present.

In the epidemic just passed, the symptoms were, in the great majority of cases, confined to the head. Rhinitis, pharyngitis, conjunctivitis, laryngitis, tracheitis, otitis, media and facial neuralgia being the prevailing manifestations. In some cases the chest was involved, and a condition closely simulating true lobar pneumonia sometimes was present.

While pneumonia and chest complications were few in comparison to the number of cases in this city, in New York and Philadelphia if the secular press can be relied upon, pneumonia was such a frequent sequel that the secular press referred to it as epidemic.

Baffling is the word that best describes this disease. The diagnosis is baffling, at least at the beginning of the epidemic and at the onset of the disease the prognosis is baffling and the treatment is baffling.

The symptoms that characterize this disease are varied. There is but one which might be called pathognomonic, the great nervous depression and weakness, out of all proportion to the other symptoms present, but this symptom is not always apparent at the commencement of the attack, and often is not marked until the acute symptoms have subsided.

Other symptoms present are not characteristic and vary greatly, but in the majority of cases are those of catarrhal inflammation of the respiratory passages, often accompanied by conjunctivitis. Sometimes the symptoms are all abdominal, and sometimes the nervous system alone shows any manifestation of the disease.

In the differential diagnosis the following symptoms may serve in most cases to determine the diagnosis, the sudden development at the same time of febrile symptoms, more or less violent pains in the head, back, limbs and in various parts of the chest or abdomen, the pains changing from place to place, and catarrhal irritation of the membranes of the respiratory or alimentary canal, or both, with decided mental and nervous depression.

Influenza is now generally believed to be due to the influence of a microbe discovered in 1892, and known as Pfeiffer's Bacillus. This bacillus is very small, is short and plump, and is difficult to propagate in the laboratory, requiring a special kind of culture soil. It is short lived and easily killed. It is found chiefly in the purulent secretions of the respiratory tract. The life history of this bacillus is not positively known, owing to the difficulty of propagating it in the laboratory. No satisfactory evidence from a standpoint of experimental reproduction of the disease has been satisfactorily obtained.

The effects produced by this organism upon the human being are such as to suggest an autointoxication rather than a generalized infection. The poison produced by the bacillus appears from clinical observations and from results obtained by intracerebral injections of cultures of the bacilli to have a selective effect upon the central nervous system.

Both living and dead micro-organisms produce symptoms of experimental toxemia in the nervous system, which has led Pfeiffer to conclude that the specific toxin is closely combined with the protoplasm of the bacterial cell.

The poison of influenza has not been isolated. It has been suggested that an intermediate animal host served to harbor the bacillus and transmit it to the human being, but the shortness of the

life of the bacillus and the ease with which it is killed, as shown by laboratory cultures, rather supports the view that the bacillus is transmitted directly from one human being to another through the medium of the respiratory discharges. But there is much evidence which appears to contradict the theory of the direct transmission of the poison from patient to patient. The disease is known to break out in epidemic form in many widely separated localities at the same time, and in districts completely isolated from places where the disease is prevailing. Individuals completely isolated, including hermits, have contracted the disease. Passengers and crews of steamers which have not been in communication with land or other ships for two weeks have contracted the disease, although the disease had not made its appearance at the port from which the vessels started at the time of their departure.

The rapidity with which this disease travels and the great distances traversed, spreading over Europe and the United States in an incredibly short time, suggests that the poison is conveyed by other means than direct contact with persons affected by the disease. This rapid transmission suggests atmospheric influence.

Many observers have recorded their belief that influenza is in some way dependent upon atmospheric conditions for its dissemination. Uncke (2) in the *St. Petersburg Medical Journal* declares: "Atmospheric conditions bear an important relation to the spread of the infecting agent."

Kowalske (3) says: "Influenza is a specific disease, occurring under conditions constantly the same, due to atmospheric influences and complicated by the pathogenic germs at hand."

Combe (4) states: "Transmission of the disease from person to person is the exception; the dissemination of the disease is accomplished through the atmosphere."

What, then, is the influence exerted by atmospheric conditions? The appearance of influenza at the same season each year is the only constant factor known which supports atmospheric influence. It is generally conceded humidity, the direction of wind, electric conditions and changes in temperature do not influence its spread.

Careful meteorological observations and records made by investigators in Chicago (5) during the epidemic of 1889 and 1890 seem to throw some light upon this subject, but, so far as I can learn, have not been verified by further investigations in this line.

These observers found that during the prevalence of the epidemic

of influenza, ozone was entirely absent from the atmosphere, and in addition an excessive amount of both free and albuminoid ammonia was constantly present. If these observations can be confirmed, and, further, if it can be shown these conditions are not present in the absence of an epidemic, they may reasonably be considered as factors in the spread of the disease.

Ozone, when present in normal quantity in the atmosphere, might serve to retard or prevent the growth of Pfeiffer's Bacillus which is shown by laboratory tests to be easily killed, and in the absence of this retarding influence the bacilli might be permitted to grow and spread. The albuminoid ammonia might serve as food for the bacilli. In this way the rapid spread of epidemics of influenza might be explained by their growth and multiplication in the atmosphere itself.

The fact that influenza is more prevalent in thickly populated places and in poorly ventilated houses, places where ozone is most likely to be deficient and albuminoid ammonia in excess, also lends support to this theory.

Unlike many of the specific germ diseases, an attack of influenza does not confer immunity.

Individuals differ widely in their susceptibility to influenza. Some are strongly predisposed to the infection and contract the disease whenever it appears, while others enjoy a partial or complete immunity.

There is no specific treatment for influenza. The toxin has never been isolated, and no auto-toxin has been discovered.

Immunity from the disease can not be acquired by any medicinal measures so far as our present knowledge goes.

Influenza makes its deepest ravages upon the better classes of people, those who live in comfortable, well heated houses, and especially those most closely confined to the house. The poorer classes, who live in poorly built houses, and who are not able to keep their houses heated night and day, are less frequently attacked by the disease. These facts point to fresh air, thorough ventilation, and the avoidance of overheated houses as the most important prophylactic measures.

Dwellings should be thoroughly ventilated (one hour, at least, should be allowed for ventilating each sleeping apartment), and the temperature of the house should never be over 70°F., and during sleeping hours fresh air should be allowed freely in the sleeping apartments.

Individuals should stay out of doors as much as possible, being careful to avoid getting the feet wet and from breathing through the

month. Deep breathing in the open air should be made a daily practice. In addition to these measures, the mouth and nose should be cleansed twice daily with some suitable antiseptic solution, and the bowels kept in good condition. In Europe the value of out of doors life is recognized not only as a prophylactic measure in influenza, but is advocated by some authorities even during the attack. Since this is a disease generally recognized as due to a specific germ, the rational treatment would be agents to destroy the germ or neutralize its toxin, but as yet no such treatment has been devised, consequently our treatment must be chiefly symptomatic.

At the begining of an attack calomel nearly always does good. It should be given in doses of two or three grains to adults, and this dose repeated every four hours until the stools show a decided effect from the drug. If there is much pain and decided catarrhal symptoms, the calomel may be advantageously combined with Dovers' powder and camphor. I have found the following useful :

℞ Hydrargyr Chlor., Mit.
 Pulv. Camphora.
 Sach. Pepsina, aa gr. viij.
 Pulv. Ipecacuanha et Opii., gr. xv.
 Mdv. et ft. Konseal No. IV.

S. One every two hours.

The calomel should be followed by quinine either alone or combined with such agents as the symptoms demand. Quinine comes nearer being a specific in influenza than any other remedial agent at our command. Its value is recognized by many observers, and probably no other drug has as many advocates. This might be accounted for by the stimulating effects of quinine when given in small, frequently repeated doses; and possibly by an influence upon Pfeiffer's *Bacillus* similar to that exerted by it upon the hematozoa of malaria. The sulphate and salicylate of quinine seem to be the most useful salts, and should be given in doses of from one to three grains every three or four hours. If an idiosyncrasy exists toward the drug dextro quinine or enquinine may be substituted, although they are not as certain in their influence upon the disease.

Among the many other drugs recommended and extolled for influenza, the following may be mentioned :

Gelsemium which, according to Boise (6) is uniformly successful and when given early, shortens the attack, and appears to have decided influence in preventing the development of pneumonic symptoms.

Two drops of the fluid extract should be given every half an hour until the physiological effects of the drug are produced.

Cinnamon (7) in strong decoction, if given in twenty-four hours of onset, is said to shorten the attack.

Furst (8) claims salipyrin is especially useful in influenza of childhood, and often acts as a specific. It can be given in four and a half grain doses three times daily to children between five and ten years old; in fifteen-grain doses three times daily to children between ten and fourteen years old. And Bekess (9) testifies to the value of this drug in the treatment of adults. He claims almost phenomenal results are obtained with it. He gives fifteen grains every evening, and half this amount every morning as long as fever is present and then continues it in ten-grain doses every night for several days longer.

Phenacetin (10) is said to be the safest and best remedy for infants when this class of drugs is indicated. It can be given in from one-half to two grain doses to infants one year old, and even larger doses have been given without producing appreciable depression.

Salicin (11) is useful in twenty to forty grain doses every hour for three to six doses, then every two hours for a day, then at longer intervals. Salophen, salicylate of soda, benzoate of soda, antipyrin, exalgin, and a host of other drugs are enthusiastically recommended for influenza. But, in my opinion, two drugs only, calomel and quinine, can be advised as applicable and of pronounced value in all forms of influenza.

The administration of other drugs must depend upon the symptoms presented by each individual case; but depressants are never indicated.

In the general management of the case, thorough ventilation of the sick room, avoidance of an overheated atmosphere, and strict cleanliness of patient and bed clothing, disinfection of the excretions, especially the respiratory discharges, should be insisted upon. Isolation of the sick is insisted upon by some authorities, but the nature of the malady makes this difficult in many cases.

The question whether it is advisable to keep influenza patients confined to their beds during the acute attack depends for its answer upon the gravity of the case and the condition of the patient. My rule is to confine my patient to bed if fever is present; if they are advanced in age; if they are not robust, or have an inherited predisposition towards tuberculosis, and to keep them confined to bed after all acute symptoms have subsided.

But cases not accompanied by fever, and where the patients are robust individuals, I believe convalescence follows more quickly when these patients are not confined to the house, but allowed to go out in the fresh air, avoiding extremely cold and wet weather.

I believe complications following influenza are more frequently induced by overheated and badly ventilated rooms than by exposure to the open air. Every convalescent from influenza should be given a reconstructive tonic, and directed to continue its use for several months.

Among the tonics that are useful for this purpose the glyceerophosphates, strychnia arsenic and nux vomica might be mentioned as especially useful.

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SYMPOSIUM ON DIPHTHERIA.*

BY BEN L. BRUNER, A.B., M.D.

ETIOLOGY AND PATHOLOGY.

I believe the aim of a paper should be to bring out only the important points, leaving the minutæ for the general discussion; therefore brevity shall be my guide. Diphtheria is an acute infectious disease caused by the Klebs-Loeffler bacillus, and characterized anatomically by a croupous diphtheritic inflammation of the mucous membranes of the pharynx and upper air passages.

Clinically, it is characterized by irregular, fine prostration, and frequently albuminuria; also by the secondary development of toxemia, and often of a croupous laryngitis or cardiac failure. It is often followed by peculiar paralysis. In large municipalities it behaves endemically, and at times epidemically.

* Read before Muldraugh Hill Medical Society, Elizabethtown, Ky., Apr. 14, 1904.

These Klebs-Loeffler bacilli are found chiefly in the meshes of the fibrilla, but also in the granular fibrin, and on the adjacent mucous membrane, and frequently, says Auelus, are found associated with the streptococci, staphylococci, etc.

As early as 1879 Klebs is said to have discovered the diphtheria bacillus, but not until 1883 did he publish and bring to general attention the results of his experiments. In 1884 Loeffler reported his observations, and in 1888 d'Espine, Roux and Yusun all confirmed Loeffler's reports by demonstrating that the bacillus found could be reproduced by pure culture, and animals, when inoculated by it, would present the inflammation and often die from the effects. In 1891 Welsh declared that all the conditions necessary to the demonstration of the specific relation of the Klebs-Loeffler had been met: (1) Its constant presence in cases of true diphtheria; (2) its isolation in pure culture, and (3) the production of all the symptoms of the disease by the inoculation of pure culture in susceptible animals.

PATHOLOGY.—The true diphtheritic inflammation has for its chief pathologic peculiarity the production of a fibrinous exudate, and when the inflammation is superficial and of a mild grade, a croupous membrane is produced, which can be easily removed from the mucosa, and undergoes necrosis more or less nearly complete, while in the severer forms the sub-mucous layer may also become necrotic.

Anders tells us that the production of the fibrinous exudate in croup or diphtheria is always produced by coagulation necrosis of the epithelium. The mucous membrane surrounding the exudate is more or less hyperemic, and the seat of muco-purulent secretions.

The membrane, when fresh, presents a grayish white color. It turns darker, becomes often yellow or dark brown, after two or three days, and if croupous in character can be easily removed, but when the mucosa is deeply involved it is more or less adherent, and can not be removed without injury to the surface, and when thus removed leaves a bleeding surface, the pseudo membrane, comprises fibrin, pus, disintegrated leukocytes, flakes of necrosed epithelium, bacilli, and sometimes red blood corpuscles.

The fibrin has two membranes (*a*) the fibrinogen of the inflammatory matter, which transudes through the capillary walls; and (*b*) the disintegral, migratory leukocytes, which form branching fibrella.

Wergert holds the inflammatory exudate is coagulated by a ferment derived from the disintegrated leukocytes.

The character of the pseudo-membrane is affected by the nature of the underlying tissue; thus, in the pharynx, it is firmer and less easily separable than in the larynx and trachea, where we find a distinct basement membrane.

The advancing edge of the false membrane is usually thin, or if the process becomes arrested, the edge may look raised or wrinkled, and often distinctly curled up.

Age changes the color and consistency of the membrane, and it sometimes becomes gangrenous, and softens or disintegrates producing a very offensive brownish, semi-liquid excretion.

If the membrane extends down into the ramifications of the bronchi there is apt to be a lobular pneumonia, or it may occur without this extension, and occasionally there may be caused from this membrane a lobar pneumonia.

The Klebs-Loeffler bacilli produce a toxin which affects the lymphnodes, liver, kidneys, spleen, heart muscle, lungs and peripheral nerves.

Welch and Flexner have shown that these visceral lesions are produced either by injections of the pure culture of the diphtheria bacillus or by the inoculation of their toxins.

The changes in the lymphnodes, while very marked, rarely leads to suppuration; the cervical, bronchial, axillary, mesenteric and inguinal lymphnodes are found to be swollen, with hemorrhage either beneath the capsule or into the substance of the gland.

The cells show more or less advanced degenerative changes, both in their nuclei and in the cell protoplasm, and the nuclei are fragmental, and the cell bodies are converted into a purely granular reticulated material, apparently fibrinous.

Peyer's patches, agminate and solitary follicles of the intestines show this.

The heart shows a fatty degeneration of its muscles so advanced as to produce changes in every fiber, while the nuclei of the muscle may become more or less fragmental also.

The changes in the kidneys include a degeneration of the epithelium of the tube and glomeruli, and hyaline alterations of the glomerular capillaries and smaller arteries.

The spleen is swollen and dry, much softened, and shows hemorrhages beneath the capsule and often into the substance of the organ. The follicles are enlarged, and the cells show disintegrative changes similar to those in the lymphnodes.

The liver is enlarged, hyperemic, and shows hemorrhage into the substance of the organ, and often fatty degeneration.

The changes in the brain are not so marked, but consist of swelling of the cell processes, and some minor changes in the cell conformation, but without evidence of degeneration of the cell or process. These changes are more marked in the cerebral than in the cerebellar cells.

Lesions are found in the spinal cord in various diphtheric paralysis, but none of these changes have been accepted as cause of the paralysis.

The changes in the lungs produced by the diphtheria bacillus are slight and of no importance.

The changes in the peripheral nerves are the most characteristic pathological lesion of diphtheria. The affected nerves are red, swelled, and the fibers degenerated, and single fibers or even a whole nerve trunk may be affected. The changes may be interstitial or parenchymatous.

The nerve sheath has a marked infiltration of leukocytes into it, and is swelled and undergoes fatty degeneration, and may even entirely disappear. The axis cylinder undergoes a similar degeneration.

LOUISVILLE, KY.

Selections.

ETHYL CHLORIDE AS A GENERAL ANESTHETIC.*

BY C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.

Senior Honorary Anesthetist to South Devon and East Cornwall Hospital; Honorary Anesthetist to the Plymouth Dental Hospital

Ethyl chloride, which until recently had been chiefly employed in England for the production of local anesthesia by freezing, was given by Heyfelder as a general anesthetic so long ago as 1848, while dental surgeons have for years noticed occasional cases of general anesthesia when using ethyl chloride to freeze the gum prior to tooth extraction.

In 1880 ethyl chloride was investigated by a committee of the British Medical Association, and was condemned, probably owing to faulty methods of administration. During the last seven years it has been employed with increasing frequency in different parts of the Continent.

McCardie, in an admirably practical paper which appeared in the *Lancet* of April 4, 1903, was one of the first to demonstrate that chloride of ethyl, *administered from a closed inhaler*, gave results which placed it in the front rank of general anesthetics.

In the spring of 1903 I began to employ ethyl chloride, but had only written accounts of its administration to work on, since none of my friends had at that time used it as a general anesthetic. Since then I have administered it to 150 patients, either alone or as a preliminary to ether, and in three cases as a preliminary to chloroform. Two patients developed asphyxial symptoms, probably due to over dosage, but caused little anxiety as to ultimate recovery.

At the South Devon Hospital at the present time the house surgeons find ethyl chloride very useful and time saving in cases requiring rapid and short anesthesia, such as the setting of fractures and minor operations in the wards, especially at night. In my private work I find ethyl chloride an admirable substitute for nitrous oxide. Infants and old people take it well, my youngest patient being aged fourteen days and my oldest seventy-three years.

* Read before the Southwestern Branch of the British Medical Association on October 7, 1903.

APPARATUS REQUIRED.

Any form of ether inhaler possessing a bag is sufficient. I have given ethyl chloride from an Ormsby, a Rumboll-Birch, a Clover, the large-bore inhalers being slightly the better because of the smaller tendency to cyanosis.

It is immaterial into which part of the inhaler the liquid is sprayed. I have had equally good results with the anesthetic sprayed into the facepiece, the upper part of which must contain a sponge into the body, or into the bag of the inhaler. I usually, on the ground of convenience, spray the liquid into the bag, which is then attached to the inhaler. The rubber of the bag is not injured by ethyl chloride. The body of the inhaler contains 1 to 1½ ounces of ether, or occasionally chloroform, for the continuance of the anesthesia.

DOSAGE.

For a child 3 cubic centimetres; for an adult 5 to 7 cubic centimetres, sprayed in one dose.

For continuing the anesthesia, two or three cubic centimetres every two or three minutes, with frequent breaths of air, according to the color of the patient and the state of the pupil, should be given, similarly in fact to administration of ether.

My longest administration of ethyl chloride alone lasted thirty-five minutes and cost nearly four shillings, which is far too expensive for ordinary work.

Ethyl chloride, as usually put up in graduated glass tubes, has little tendency to decompose; McCardie has successfully employed a stock eighteen months old.

INDUCTION OF ANESTHESIA.

Given from an ether inhaler fitted tightly to the face, anesthesia is usually complete at the end of one minute. If anesthesia is not complete in one and a half minutes, the reason is that either air is being admitted, or too little ethyl chloride has been used, most probably the former. Struggling is usually absent, but if present is easily controlled. At the end of one to one and a half minutes the patient is snoring gently, with widely dilated pupils, loss of corneal reflex, and relaxed muscles. A rash, similar to that of ether, quickly appears, and is most marked on the neck and shoulders. When seen for the first time the sudden insensibility with enormous pupils is very striking.

McCardie has estimated the average duration of ethyl chloride

anesthesia to be seventy-one seconds, which, compared with the average duration of nitrous oxide anesthesia, given by Hewitt as thirty seconds, gives an advantage in favor of ethyl chloride of forty-one seconds. Return of consciousness is rapid and complete.

Like ether, ethyl chloride, from its stimulating properties, occasionally produces a copious flow of saliva and mucus.

CONTRA-INDICATIONS.

McCardie considers that the only contra-indication to the use of ethyl chloride is narrowing about the larynx, and, with this one exception, I have given it to all kinds of patients for most of the ordinary major and minor operations without the occurrence of dangerous or serious symptoms either during or after anesthesia.

CONTINUATION OF ANESTHESIA.

When the anesthesia has to be prolonged I usually pass from ethyl chloride to ether, which is placed beforehand in the body of the inhaler with the indicator at 0. Breaths of air must be given according to the color of the patient while the indicator is being rapidly advanced to between 2 and 3. The transition from ethyl chloride is much easier and less liable to be marked by partial return of consciousness than is the transition from nitrous oxide to ether.

If chloroform is necessary from the nature of the operation, I either change from ethyl chloride to ether and from ether to chloroform, or pass from ethyl chloride direct to chloroform, commencing with chloroform in the body of the inhaler, the indicator being at 0, and, as soon as ethyl chloride anesthesia has been induced, remove the bag and gradually advance the indicator to 1 or $1\frac{1}{2}$, according to the state of the patient.

EXPENSE COMPARED WITH THAT OF NITROUS OXIDE.

Working with nitrous oxide at six shillings per 100 gallons, and allowing seven gallons for each patient, one nitrous oxide anesthesia costs 5.13 pence, and with ethyl chloride refills at two shillings and ninepence per fifty cubic centimetres, one ethyl chloride anesthesia costs 4.71 pence—a difference in favor of ethyl chloride of .42 of a penny, or three shillings and sixpence on each hundred administrations.

RISKS TO LIFE.

No drug sufficiently powerful to produce unconsciousness can be absolutely free from risk. Luke says: "Scit alone has published

records of 12,500 cases, with only one death. In all the fatalities which have occurred under ethyl chloride—and there are four or five cases on record—the patient has been suffering from some grave cardiac or respiratory disability, and as Dr. Hewitt puts it in the September number of the *British Dental Journal*, we are now entitled to consider that ‘ethyl chloride is a comparatively safe anesthetic,’ as safe, all things considered, as ether. I should now put the mortality at something between 1 in 10,000 and 1 in 15,000; but of course, as with all anesthetics, much depends on the experience of the administrator,” and later says: “Employed in its own sphere, namely, for inducing anesthesia only prior to ether or chloroform, and for brief dental or throat operations, ethyl chloride is undoubtedly very much safer and more convenient than chloroform.”

GENERAL CONCLUSIONS.

Ethyl chloride, giving for short operations, produces an anesthesia which lasts more than twice as long as that of nitrous oxide. In short dental operations ethyl chloride, by producing muscular relaxation, does away with the preliminary gagging, which to many patients is the most objectionable part of nitrous oxide anesthesia.

From its portability and power of rapidly inducing a general anesthesia which is followed by quick recovery and slight after effects, ethyl chloride bids fair to come into general use, especially in private and country practice, and, as a preliminary to ether or chloroform, likely to largely supersede nitrous oxide.—*Bristol Medico-Chirurgical Journal*.

Progress of

Medical and Surgical Science.

Conservatism in Surgery of the Uterine Appendages.—McNamara, in *The Brooklyn Medical Journal*, June 24, very conservatively looks at the treatment of salpingitis, and decries the practice of indiscriminately excising the organs affected in such cases. He retains the term salpingitis as being more comprehensive, including pus and hypermic states, as one is never sure of not finding a purulent focus in the inflammatory adhesion of the peritoneum. He advocates posterior colpotomy and drainage of pus pockets, or from distal end of tube, in preference to the so-called radical method of total removal of tubes and then by unsexing a woman, as he expresses it, "removing the organs which give a woman her characteristics." His method is simple posterior colpotomy, cul de sac opened, finger separates adhesions, pus sacs are ruptured. Antiseptic lavage and application of an iodoform tampon completes operation. He says Goffe reports 115 cases treated this way with no deaths and ten pregnancies. Secondary colpotomies may be formed or the abdominal ablation later. In conclusion McNamara quotes an author who is conservative on surgery of lesions of the tube and ovary. He says: "1. Medical treatment suffices in at least one-half of the cases of salpingo—oophoritis. 2. Medical treatment being insufficient or contra-indicated, one should never at the outset perform a radical operation of any sort. 3. The first operative stage should always be posterior colpotomy."

How to Give Iodide of Potassium.—Blackwood, in the *Medical Summary* of June, 1904, gives some interesting methods of giving potassium iodide to lessen its disagreeability of both taste and untoward effects. He says given with a small dose of bromides greatly lessens the tendency to acne caused by large doses of the iodide, and also lessens the gastric distress. Where not contra-indicated arsenious acid can be used in connection with the iodide to this end. Demulcent substances, as mucilage, flaxseed tea, can be flavored as with orange oil, and lessens the irritability of the stomach. He claims the intestine is less irritable than the stomach. Mixed with milk or whey, iodide salts may be prescribed. Where given in plain solution, it is given in doses

gtts. i, in plenty of water every hour until patient tolerates taste, and then the time between doses lengthened and doses increased. Vanilla, or more popularly chocolate, with starch and rennet, or curds and whey, can be used. He believes the prescribing of iodides in a case of irritable stomach may cause an acute gastritis, which complicates an already bad state, and should be cautiously given, and that all iodides are disturbing at times more than any other remedy, and should be tried with one menstruum and then another or one salt or another until the most agreeable one is found.

Post Partum Hemorrhage Radically Dealt With.—*Canadian Practitioner and Review*, June, 1904, quotes Prof. H. Fritch (*Deutsch Med. Woch.*) as saying that post partum hemorrhage should be treated on a settled plan, and time should not be wasted in trying useless methods.

1. Prophylaxis consists in proper management of the third stage of labor. That if the uterus is squeezed or massaged directly after the child is born the placenta partially separates, the uterus is unable to contract evenly, and hemorrhage is inevitable.

2. That ten or fifteen minutes after delivery of child the fundus of the uterus should be gently massaged to stimulate an even regular contraction.

3. That post partum hemorrhage is most frequently due to an atonic condition of the uterine walls, and the woman is already pulseless.

Treatment.—The accumulation of blood in the uterine cavity is expressed, the hands are passed between the abdominal recti, they being easily pushed aside, so as to search the back of the uterus, which is raised as high as possible, and forcibly antiflexed and compressed against the superior and posterior surface of the pubis.

The resulting funnel-shaped pouch of skin and muscle is firmly plugged with folded towels or cotton. A rubber bandage is applied over the padding which is forced behind the uterus toward the pelvic inlet. The body of the uterus then lies above and in front of the symphysis pubis.

Dr. Fritch claims the following advantages for this method ;

1. By compression of the abdominal cavity the blood is retained in the upper half of the body more effectually than by direct compression of the abdominal aorta and bandaging the legs.

2. Hemorrhage is impossible, as the uterine walls are so pressed together as to obliterate the cavity.

3. Hemostasis is immediate. If the uterine cavity is plugged large quantities of blood escape during the operation, and are absorbed by the tampon itself. Cases have been seen which, after the completion of plugging, the woman was found to be dead.

4. No time is lost in disinfecting the hands, as no internal manipulations are required.

5. The pad once in place, no further disturbance of the patient is necessary, and there are no uterine plugs to be removed.

Notes on Curettage.—Stoner, in the *Journal of the American Medical Association* of June 18, 1904, enumerates the usual conservative limits of the operation of curettage and the indications for the same, as also the not so much contra-indications, but the non-necessity for curetting some diseased endometrii. He also gives good outline of procedure, which we believe will avoid many accidents. He bimanually outlines the uterus, and explores the cavity with a dull wire curette before active curettage is begun. He then systematically scrapes the cavity with a thin, sharp curette, and also takes the smallest sized instruments and carefully scrapes the cornua. Cavity is irrigated with sterile water, and no packing used except in septic cases. Iodoform gauze may be left in vagina, and is changed twice daily. The only danger is infection practically; hence the operation for curettage should require the preparation equal to a vaginal section at least. The above case in the line of outlining the cavity will prevent working in absolute darkness as to shape and size of same.

A Case of Carbolic Acid Poisoning.—Harvey, in the *Boston Medical and Surgical Journal* of June 6, 1904, reports a case of carbolic acid poisoning in a child, it having taken only a toxic dose, with very little of the corrosive action. A two-year old child drank a small quantity from a cup containing carbolic acid, which was to be used for bed bugs. The child only took a few steps and fell limp to the floor. Dr. Harvey arrived ten minutes later, when radial pulse was imperceptible, body cold and mottled. He considered the child's case hopeless, but gave several subcutaneous injections of brandy and strychnia, grain one-sixtieth, and the respiration improved and pulse could be felt. Next he washed out stomach, and managed to get the whites of two eggs, and some brandy into it. The stomach, he believes, contained little phenol, and that was absorbed. Pulse and respiration remained fair for thirty minutes, then the respiration failed. Sylvester's

method availed nothing, and cyanosis increased, pupils dilated, lips became livid, muscles rigid. The child refused to take a breath. Mouth to mouth insufflation was used, and affected a feeble tendency to inspire. Ten minutes of the above means restored respiration, and after several hours of close watching, with occasional stimulation, patient was in a fair condition, conscious and desirous of sitting up. Only a few slight burns were noticed.

Carbolic Acid Antidotes.—Asher reports experiments made to determine whether the action of alcohol, glycerin, etc., is chemical or otherwise. He summarizes his results by saying: 1. The physical or chemical properties of the various factors used were never affected, therefore chemical change never occurred. 2. The antidotal power of alcohol and glycerin depends largely on the dilution induced. We know that a drop of sulphuric acid will produce escharotic properties at once while the same quantity in diluted state fails. In addition to that of dilution, alcohol possesses dehydrating and astringent properties, which prevent the absorption of carbolic acid by the tissues.—*Journal of the American Medical Association*, April 30, 1904.

Appendicitis and Pelvic Inflammation.—Baldy disbelieves in the casual relationship of appendicitis with pelvic inflammation. In his experience the two diseases are very rarely associated, and then only as a coincidence. He has not found a single case in which, having found pus in the fallopian tube, he has found pus in the involved vermiform appendix, nor has he found pus in a tube or ovary complicating a perforated or gangrenous appendix.—*Journal of the American Medical Association*.

From the Medical Record, June 18, 1904.

On the Alleged Transmissibility of the Malaria Parasite from Mother to Infant.—M. Grabham has carefully examined the blood of a number of pregnant women near delivery. Blood films taken from the infants stained by the Romanowsky method and submitted to prolonged and repeated search showed no trace of parasites, nor did they give any other indications of malaria, such as melanin granules in the leukocytes. In the blood of four of the mothers numerous malaria parasites were found. The temperature of the infants showed no abnormal variations. All of the infants were somewhat feeble.

Quinine was entirely withheld from the mothers while these observations were being made.—*British Medical Journal*, June 4, 1904.

Surgical Treatment and Histology of Rontgen-ray Ulcerations.—

Baermann and Linser found that extensive areas of facial lupus were more completely cured when a pronounced reaction attended the use of the X-rays, rather than when the reaction was mild. In a number of cases, however, there were severe ulcerative processes which could not be healed by ordinary measures. Good results were secured by transplanting pediculated skin flaps, the Thiersch method proving entirely ineffective. Eight cases are reported which were thus treated with excellent results. Histological examinations of specimens taken from the ulcers produced by the rays show that the latter have their principal effect apparently on the blood vessels, which are damaged and destroyed. There is, therefore, as it seems, no selective action on the epithelium. Such a process, however, would account for the gangrene of the lower lip, which was noted in one case as the result of the application of the rays. Proliferation from the edges readily took place in these ulcers, but the lack of granulation tissue for it to grow upon, from defective or destroyed blood vessels, prevented its further extension over the raw surfaces.—*Munchener medizinische Wochenschrift*, May 24, 1904.

A Rare Case of Infective Splenic Anemia.—Andreo Pitini

describes a rare case of splenic anemia in a baby of two and one-half years, of healthy parentage, and well, up to the beginning of the disease described. The child began to have fever, to grow pale and lose flesh, and to have edema of the face and feet, at the same time that the abdomen began to enlarge below the costal arch on the left side. His gums were swollen and eroded, and bled easily. All the abdominal organs appeared to be normal except the spleen, which was markedly enlarged, extending from the ribs to below the level of the umbilicus. There were no enlarged glands. The blood examination showed the leukocytes moderately increased in number. In the blood from the spleen, liver, heart and veins was found a pure culture of a diplococcus. The brother of the patient, aged eight months, also had an enlarged spleen and increase of leukocytes. The author states that Fich believed splenic anemia to be due to infective germs which caused toxic substances to be elaborated by the spleen, and these produced the progressive anemia. Concetti believed it to be secondary to some acute

infection, such as rheumatism, malaria, syphilis, tuberculosis, a gastro-enteritis, or rachitis. The products of these infections were carried to the liver by the circulation and produced the anemia. In the author's case these could all be excluded, and he believes it to have been due to the diplococcus found in the blood.—*Gazetta Medica Lombarda*, March 28, 1904.

Trophic and Circulatory Disturbances of the Skin Resulting from Injections of Paraffine.—Dionis Sejour recounts the history of an interesting case in point: A young woman had injected paraffine into her breasts in order to make them more full. The mixture of paraffine and vaselin which she used was analogous to that of Gersuny. The first injection was so painful that the patient was obliged to stop the operation. The pain was followed immediately by tumefaction, redness of the skin, and tenderness of the axilla. Three weeks later, injections were made into both breasts without any reaction. At the end of fifteen days intermittent pains developed on the right side, followed soon by a change in the color of the skin, which became violet-colored in spots, while a sinking in the breast showed diffusion of the injected material. At first inflammation was thought to be the cause of these phenomena, but treatment for the same met with no response. Two incisions were then made, and as much as possible of the foreign matter pressed out. There was no pus. At the end of a month the wounds, which had a varnished aspect, were retracted, but there had never been any inflammatory reaction. There was a little trouble on the left side, but never as marked as on the right. The persistence of the troubles in spite of treatment, and the absence of inflammatory phenomena, certainly point to the existence of trophic and circulatory troubles, due, no doubt, to the penetration of particles of the injected mass into the blood system. Injections of paraffine are not so innocent as is sometimes supposed, and should, like every other surgical operation be reserved for necessary cases.—*Gazette des Hopitaux Civils et Militaires*, April 19, 1904.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
S. B. HAYS, M. D., Manager.

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

Some time ago an article appeared in THE AMERICAN PRACTITIONER AND NEWS, being a selection by a teacher of therapeutics, and dwelt on the administration of organic iron, with a supplement consisting of a report of cases. The report of cases undoubtedly was originally meant to advertise an organic iron preparation, but such a motive was most remote in the minds of this journal. Thinking, however, that such was the management's motive, several editors, or more surely speaking, several journals "jumped" on us good and strong, but now, knowing our attitude toward the same, we feel sure no more allusion can be made to our apparent discrimination. An editorial in the *Toledo Medical and Surgical Reporter*, April, 1904, certainly seems timely, and is much to our point of feeling in such matters, and stable preparations of iron that have withstood the tests of time, like Pepto-Mangan, are still here and here to stay. We take pleasure in adding hereto the *Toledo Journal's* "When Your Case Is Weak Abuse

the Other Side," although it has been selected by several other periodicals.

"*When your case is weak, abuse the other side.*"* This maxim has been a favorite standby with the legal profession from time immemorial, and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of the profession, covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusinesslike method of attempting to cast discredit upon other reliable and thoroughly tested combinations we can not term otherwise than despicable, and furthermore, we know our readers can not be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was admitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.

EDITORIAL NOTES.

Dr. Sidney J. Meyers has resigned his Chair of Pathology and

* The Toledo Medical and Surgical Reporter, April, 1904.

Hygiene in the Medical Department of the Kentucky University, and his name will appear in the Louisville Medical College catalogue as Professor of Medicine, Clinical Medicine and Hygiene. Dr. Meyers is well known as a teacher, and devotes a great deal of attention to the above subjects.

BANQUET FOR DR. McMURTRY.

A very large and handsome dinner was given by the medical profession of Louisville, Ky., to Dr. Louis S. McMurtry, President-elect of the American Medical Association. After a formal reception in the large parlor of Seelbach's Hotel, the party repaired to the banquet hall, where covers were laid for over a hundred, and able representatives of the city's men formed a stately picture. Dr. Chas. L. Reed, of Cincinnati, Ohio, was the guest of the evening, and Dr. William Bailey presided as toastmaster. The following toasts were responded to:

Distinguished Men in Medicine.....	Dr. John A. Ouchterlony
Medical Organization.....	Dr. Joseph N. McCormack
Surgery of the South.....	Dr. Horace H. Grant
The Successful Man in Medicine.....	Dr. Jos. M. Matthews
Medical Education in the South.....	Dr. Clinton W. Kelly
The young Man in Surgery.....	Dr. John R. Wathen
The Medical Man of Yesterday and Today.....	Dr. J. Garland Sherrill
Fraternalism in Medicine.....	Dr. Thomas F. Satterwhite
The American Medical Association.....	Dr. Louis S. McMurtry

Dr. McMurtry constitutes the fourth President of the Association that Louisville has had the honor of possessing. The other three were Drs. Henry Miller, David Vandell and Joseph M. Matthews. The banquet was quite an honor to Dr. McMurtry, and a credit to the medical profession of Louisville.

Doctor Fred. L. Koontz read a paper before the Louisville Society of Physicians and Surgeons, which met at Seelbach's Hotel, June 17, 1904, the subject of which was "Gynec. Pathology." The paper possessed a great deal of originality, in that it was unlike any classical paper on any one class of affections, but it enumerated the many common every day causes of diseases common to women. The paper will be published in the July 1st issue of THE AMERICAN PRACTITIONER AND NEWS.

Book Reviews.

Manual of Clinical Microscopy and Chemistry, prepared for the use of Students and Practitioners of Medicine. By Dr. Herman Lenhartz, Professor of Medicine and Director of Hospital at Hamburg, etc. Authorized Translation from the Fourth and Last German Edition, with Notes and Additions, by Henry T. Brooks, M.D., Professor of Histology and Pathology at the New York Post-Graduate Medical School and Hospital; Member of the New York Academy of Medicine. With 148 Illustrations in the Text and 9 Colored Plates. Pages xxxii-412, Octavo. Bound in Extra Cloth. Price, \$3.00 net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

Were the reviewer to undertake a systematic review of this excellent book and conscientiously elaborate on all of its good points too lengthy a discourse would be necessitated. In brief, the manual is unusually up to date (as in the staining method of Leischman and Wright); is replete in the chemistry and methods of manipulation in clinical diagnostics; the classification of animal and vegetable parasites is simple, and will facilitate their teaching, and its simple index affords ready reference. The blood and bacteria charts are exceptionally good, in that they do not overexaggerate the microscopic picture. The chapter on the urine in special diseases, as well as the chemical tests of the urine are above the average. All methods of bacterial and blood staining that are practiced are given to that end. A chapter on the microscope is not amiss.

We have doubts that this book has a better, and certainly, if equaled, much praise should be accorded that equal. We can not say too much for this manual, and highly recommend it to all who do, or who intend to, study the human body in health or disease.

Immune Sera: Hemolysins, Cytotoxins and Preciptins. By Prof. A. Wassermann, M.D., University of Berlin. Authorized Translation by Chas. Boldman, M.D. First Edition. First Thousand. New York: John Wiley & Sons, 1904; London: Chapman & Sons, Ltd., 1904.

Immune Sera, the above little book of Professor Wassermann's lectures, fills a long needed want, for it contains all the important experimental data pertaining to the many theories of immunity. Any one who is constantly perusing the medical journals knows that almost every periodical has an original article on immunity, and supplemented with a vast amount of reference.

We now see this valuable 76 page book of text, with a two-page (2)

index of literature referring to the same text, an interesting, concise, well written and well translated discourse of the immune sera, hemolysins, cytotoxins and precipitins.

The type is clear, quality of paper extra, neatly and substantially bound. Price, \$1.00. The table of contents can easily lead to any portion of text. It has no index.

The Mothers' Manual, A Month by Month Guide for Young Mothers. by Emilyn Lincoln Coolidge, M.D., Visiting Physician to Out Patient Department of the Babies' Hospital, New York; formerly House Physician of the Babies' Hospital, New York; Physician in Charge of the Babies' Clinic of the Society of Lying-in Hospital of the City of New York. Illustrated. New York: A. S. Barnes & Co., 1904.

This small 12mo., cloth, \$1.00 "Mother's Manual," is an almost invaluable aid to the mothers, as it treats of the infant and child by the most conveniently arranged epochs in its life, being divided monthly until its care will allow more latitude in the classification of its early life periods. It is strictly a book to the laity, and fulfills the want of the mother to interpret the many pictures seen in the growing infant or child. Good and bad practices are given their proper treatment in the text, and after taking the child by its living periods. Backward children are discussed, and an appendix added on proprietary foods and the baby's wardrobe. Nurses and mothers should be acquainted with its contents, and it also can be found interesting to the physician.

The Practical Medicine Series of Year Books, comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Issued Monthly Under the General Editorial Charge of Gustavus P. Head, M.D. Obstetrics, Vol. V., edited by Joseph B. De Lee, M.D., Professor of Obstetrics in Northwestern University Medical School. Chicago: The Year Book Publishers, 40 Dearborn street April, 1904.

The above volume merits the good reception it has received by those who have availed themselves of it, and on review of its pages, there is seen the happy tendency toward a better understanding of the physiology and greater knowledge of the pathology of the gravid state and puerperium. Contributions consist mainly from American authors; the surgical feature is not so strong. The last chapter contains thirty-five pages of obstetrics, surgery and views, experience and reports of many leading operators in many modern procedures and manipulations. We can well recommend this volume.

The Principles of Obstetrics, A Practical Manual for the Student and General Practitioner, by Stanley Perkins Warren, M.D., Obstetric Physician to

the Maine General Hospital ; Consulting Physician to the Main Eye and Ear Infirmary. Profusely illustrated. New York : Wm. Wood & Co., 1903.

Any student who is so fortunate as to avail himself of this manual can follow any teacher, have a book that is wieldy, practical and concise, covering the ground fully, and being capable of ready reference. Intentional omission of the burdensome discussions and theories which hamper and impede the student in his search for the practical points is one of its chief merits, and its brevity does not impair the meaning back of thoroughness of text. Its worth most certainly does not stop with the student, for it is especially adapted to obstetrical technique and surgery outside of the hospital, as well as having an especial chapter on pathology and obstetrics. Precious moments in a student's life can be both saved and used to advantage in the perusal of this book, and we heartily recommend the same.

A Text Book of Physiology, by Isaac Ott, M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. With 137 Illustrations. Royal octavo, 563 pages. Bound in extra cloth. Price, \$3.00 net. Philadelphia : F. A. Davis Company, Publishers, 1914-16 Cherry street.

The author says : " The aim has not been to write a treatise on the subject, but rather an elementary work containing the chief facts of physiology which are necessary to the student who wishes to apply them in the practice of his profession. Physiology is the basis of medicine, and its understanding is requisite to the study of pathology. With this idea in mind, space has been given to the subject of electrophysiology."

The author has kept well within the line that he laid down when he began to write the book ; in short, it is a compilation of facts concerning the study of physiology, so arranged as to present them in the most concise and simple manner. We have no doubt but what the book will take its place among the standard works of its kind.

BOOKS RECEIVED.

Manhattan Eye and Ear Hospital Report, No. III. March, 1904. Jonathan Wright, M.D., Editor, 103 Park Avenue, New York.

Annual Report of the Surgeon General of the Public Health and Marine Hospital Service of the United States for the Fiscal Year 1903. Washington, D. C. : Government Printing Office, 1904

Notices.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended June 9, 1904:

PURVANCE, GEORGE, Assistant Surgeon General—Granted leave of absence for twenty days from May 31—June 1, 1904.

VAUGHN, G. T., Assistant Surgeon General—Detailed to represent the service at the meeting of the American Medical Association, Atlantic City, N. J., June 7-10. June 1, 1904.

GEDDINGS, H. D., Assistant Surgeon General—Detailed to represent the service at the meeting of the American Medical Association, Atlantic City, N. J., June 7-10. June 1, 1904.

CARTER, R. H., Surgeon—Directed to report to Chairman of Isthmian Canal Commission for duty. May 25, 1904.

CARMICHAEL, D. A., Surgeon—Bureau letter of May 4th, granting Surgeon D. A. Carmichael leave of absence for fifteen days from May 12th, amended to read twelve days from May 12th. May 28, 1904.

PECKHAM, C. T., Surgeon—Granted leave of absence for seven days from May 28, 1904, under Paragraph 191 of the regulations. Relieved from duty at the Immigration Depot, New York, N. Y., and directed to proceed to Buffalo, N. Y., and assume command of the service, relieving Surgeon Eugene Wasdin. May 27, 1904.

WASDIN, EUGENE, Surgeon—Upon being relieved by Surgeon C. T. Peckham, to proceed to Memphis, Tenn., and assume command of the service, relieving Surgeon G. M. Magruder. May 27, 1904. Granted extension of leave of absence, on account of sickness, for sixteen days from May 1st. June 1, 1904.

MAGRUDER, G. M., Surgeon—Upon being relieved by Surgeon Eugene Wasdin to proceed to Cincinnati, Ohio, and assume command of the service. May 27, 1904.

YOUNG, G. B., Passed Assistant Surgeon—Two days leave of absence under Paragraph 189 of the regulations.

ROSENAU, M. J., Passed Assistant Surgeon—Detailed to represent the service at the meeting of the International Association for Study and Prevention of Tuberculosis, Atlantic City, N. J., June 6th. June 1, 1904. Detailed to represent service at the meeting of the American Medical Association, Atlantic City, N. J., June 7-10, stopping at Philadelphia, Pa., en route, on special temporary duty. June 6, 1904.

NYDEGGER, J. A., Passed Assistant Surgeon—Granted extension of leave of absence, on account of sickness, for fifteen days from May 21st. May 26, 1904. Granted extension of leave of sickness, for five days from June 5th. June 6, 1904.

OAKLEY, J. H., Passed Assistant Surgeon—Directed to proceed to Vancouver, B. C., for special temporary duty. May 27, 1904.

ANDERSON, C. F., Passed Assistant Surgeon—Directed to proceed to Detroit, Mich., for special temporary duty. May 27, 1904.

GWYN, M. K., Assistant Surgeon—Directed to report to Chairman of Examining Board at Manila, P. I., August 8, 1904, for examination to determine his fitness for promotion to the grade of Passed Assistant Surgeon. June 6, 1904.

BARKS, M. C., Acting Assistant Surgeon—Granted leave of absence for fourteen days from June 13th. June 8, 1904.

DELGADO, J. M., Acting Assistant Surgeon—Granted leave of absence for ten days. June 1, 1904.

FOSTER, J. P. C., Acting Assistant Surgeon—Granted leave of absence for four days from June 5th. June 7, 1904.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon—Granted leave of absence for four days from June 7th. June 4, 1904.

HALLETT, E. B., Acting Assistant Surgeon—Granted leave of absence for four days from June 7th. June 7, 1904.

MASON, W. C., Acting Assistant Surgeon—Granted leave of absence for five days from June 27th. June 3, 1904.

RODMAN, J. C., Acting Assistant Surgeon—Granted leave of absence for seven days from June 7th. June 2, 1904.

PROMOTION.

HALL, L. F., pharmacist of the third class, promoted to be pharmacist of the second class, to be effective from April 19th. June 8, 1904.

BOARD CONVENED.

Board convened to meet at Washington, D. C., June 1, 1904, for the physical examination of all officers of the Revenue Cutter Service. Detail for the Board—Assistant Surgeon General L. L. Williams, Chairman; Assistant Surgeon General J. J. Pettus, Recorder.

PATENTS GRANTED MAY 24, 1904.

750,615. Hernial Truss—Frank M. Crolus, Memphis, Tenn.

760,823. Uterine Supporter—Miriam J. Torrance, Los Angeles, Cal.

761,029. Apparatus for Therapeutic Purposes—Fred. H. Brown, Los Angeles, Cal.

MAY 31, 1904.

761,199. Apparatus for Producing an Alternating Magnetic Field for Therapeutic Purposes—Ernst Buhtz, Berlin, Germany.

761,217. Rectal Syringe—Emerson A. Gilbert, Jamestown, N. Y.

761,369. Apparatus for Diagnosis—Barbara J. Francis, New York, N. Y.

761,504. Surgical Apparatus—John Kleinbach, Spokane, Wash.

761,513. Manufacture of Surgical Bandages—John E. Lee, Conshohocken, Pa.

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F. W. SAMUEL, A. M., M. D., } EDITORS.
A. D. WILLMOTH, M. D., }

S. B. HAYS, M. D.,
MANAGER

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THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNA.*"

VOL. XXXVIII.

LOUISVILLE, KY., JULY 1, 1904.

NO. 151.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a "plain" fact may be told in a plain way, and a "twisted" downright fact is not so pleasant to read as anything else. — *REMARKS.*

Original Articles.

PATHOLOGICAL PRODUCT OF THE URINE AND THEIR SIGNIFICANCE.*

BY E. S. ALLEN, M.D.

Professor Pathology Kentucky School of Medicine.

Wherever in the economy pathogenic processes seriously disturb nutrition or normal metabolism, the results are recorded in the urine, because the urine more eminently than any other excretion represents the equation of these changes. No serious disease can be in progress in the economy without giving rise to more or less marked changes in urine. The recent advances in our knowledge of physiological chemistry, with the more refined use of the microscope, have lent great precision to the study of the composition of the urine, and thereby furnished us with a keener insight into the relationship of the urine to the organism both in health and in disease.

The accurate study of the urine has become one of the essential features in advanced clinical medicine, for through urinalysis a number of diseases can be determined, their intensity be gauged, and their progress toward recovery, or their tendency toward a fatal termination be predicated.

A thorough knowledge of the constituents of the urine of a perfectly healthy individual both from a microscopical and chemical

* Reprinted from the Louisville Clinical Society, June 16, 1904.

standpoint enables us with readiness to detect any pathological products, and when we accept the excretion and secretion of urine to be both a physical and vital process, we can with a greater degree of precision trace these pathological findings to their origin, thereby locating the lesion.

A healthy individual, weighing 150 pounds, under normal conditions should excrete fifty ounces of urine in twenty-four hours, held in solution or suspended are solids in about the proportion of: urea, 300 grains; uric acid, 8; kreatin, 14; hippuric acid, 6; pigments and extractives, 154; sulphuric acid, 30; phosphoric acid, 48; chlorine, 107; ammonia, 11; potash, 30; sodium, 170; calcium, 4, and magnesium, 3.

Any marked deviation from these proportions is indicative of pathological urine, and we are to determine whether or not the kidney is at fault in failing to excrete these excrementitious substances or whether some other organ is functionally inactive, and has failed to convert certain products of tissue katabolism into a molecule toward which the renal epithelium exercises a positive chemotactic property. For instance, the normal or highest oxidation of the proteid molecule is urea, for which the renal epithelium has a selective action in extracting from the blood, whereas incomplete tissue metabolism, with a sluggish hepatic action, whose function it is to more completely oxidize products of tissue waste, thereby converting toxic nitrogenous products into less harmless substances, is frequently the cause of the absence of excrementitious substances from the urine, they being retained in the blood.

Urea, though a product of disassimilation, plays an important role in the economy, and is pathological when absent from the urine, for it possesses the property of forcing the renal barrier, and of removing, while making its own escape from the organism, both water, in which it is itself dissolved, and toxic matters which are united with it. Urea is nature's diuretic, and the more complete is tissue metabolism, the more urea that is manufactured, and the more urea in the blood, the more diuresis and the more toxic elements extracted by the kidney, provided we have a healthy kidney to do the work, for urea can not increase the functional activity of a kidney that has had its parenchymatous epithelial cells degenerated or exfoliated, for it is on these cells which line the uriniferous tubules that urea has its selective action.

When the liver strikes work and tissue metabolism is faulty, we have a diminution of urea in the blood, and the renal epithelium is, to

a very marked extent, dependent on the presence of urea for its activity, we have a retention in the blood of products twenty times more toxic than urea, and these toxins accumulate and interfere further with the complete oxidation of the proteid radicle, and the amount of urea constantly becomes less, instead of accumulating.

Bouchard has eliminated some of these toxic elements, and classifies them as follows:

1. A narcotic substance of organic nature, not urea, for urea does not produce sleep, its chemical formula is unknown.

2. Two substances causing convulsions, which are fixed and of organic nature, found in the urine in less quantity during the day than is the narcotic substance, but of less physiological activity, the narcotic substance killing before the convulsive substance has effect. In order to kill by convulsions it is necessary to remove the narcotic substance.

3. Another organic substance, of the convulsive type, which produces contraction of the pupils.

4. An organic substance which reduces heat, and is not ammonia.

5. A sialogenous substance, producing salivation, but the total amount of urine to kill does not contain this substance in sufficient quantity to get the physiological effect.

Urea is toxic when deficient, and can only be toxic from its mechanical presence by occupying space that should be occupied by the red cell, like water, when introduced into the organism in sufficient quantity, can kill. Pure distilled water, part for part, is more toxic than is urea, for the water is not an isotonic solution, and causes pathological changes to take place in the red cell, etc. Say that the average man excretes 300 grains of urea in twenty-four hours. By experiment it has been demonstrated that urea is toxic in the proportion of $97\frac{1}{2}$ grains per kilogram of animal. An average man weighs about sixty-five kilograms. It would take 6,337 grains of urea existing in the blood at one time to seriously interfere with the vital functions of the organism; so man, manufacturing urea at the rate of 300 grains daily, and retaining all of it, would be twenty-one days in killing himself, whereas one-half of the toxic products eliminated in twenty-four hours, if retained will produce death.

Potash alone is toxic in the proportion of .05 grms. per kilogram of man, and if not eliminated will in forty-eight hours have accumulated in sufficient quantity to cause convulsions.

Urea, then, primarily known as an excretion, must also be referred to as a secretion, because by increasing the functional activity of the

renal epithelium, is of service to the economy. It is a product which gives us some idea as to the functional activity of the kidney, and whether the kidney is responsible for a toxemia or whether there is a sluggish hepatic action, with a faulty tissue metabolism, lessening the amount of urea to be found in the blood.

A diminished amount of urea is suspicious of renal insufficiency, and requires a careful search for albumen and certain renal derivatives that are indicative of kidney change.

Albumenaria—The albumens met with in the urine are serum albumen, serum globulin, albumose or peptones, the albumens of Bence Jones, hemaglobin, nucleo albumen, fibrin, histon and nucleo histon. Of these serum albumen is the most important from a clinical standpoint. Albumen in the urine, under any and all circumstances, is a pathological product.

The epithelial cells lining the uriniferous tubules of the kidney are endowed with so-called vital characteristics, positive and negative chemotactic properties, the power to attract and extract certain products that are of no further use to the economy, and of repelling those products the escape of which would be of detriment to the organism, such as the albumens, albumoses.

With the epithelial surface of the uriniferous tubule intact, no albumen can escape from the blood. Denude the tubules of these cells or in any way devitalize or interfere with their nutrition, and albumen at once appears in the urine.

Some claim that traces of albumen may be temporarily met with in the urine of apparently healthy individuals, after muscular exercise, cold baths, mental labor, menstruation, pregnancy and during digestion, the so-called functional, transient or physiological albuminuria.

Muscular exercise, mental labor, cold baths, etc., can not be regarded as physiological stimulants for all persons, for the circulatory equilibrium is interfered with, normal cell metabolism is disturbed or arrested, toxins and albumens result, which, upon bathing, the renal epithelium produce certain protoplasmic changes, such as cloudy swelling or parenchymatous degeneration; the nutrition of the cell is impaired, and an arrest of its negative chemotactic properties the renal barrier is broken, and there occurs a transudation of the albuminous elements of the blood in the urine. Now, if only a mild toxemia exists, the albumen is temporary, the renal cells becoming revitalized, and albumen can no longer escape; a repetition of the exciting cause and the cloudy swelling of the cell becomes granular or

fatty, and are exfoliated, and appear in the urine as free renal detritives or in the form of epithelial casts; the basement membrane of the tubules is stripped of its epithelial barrier, and the slightest disturbance of the renal circulation causes albumen to appear in the urine in greater or less quantities: the so-called cyclic albuminuria.

Rein Pecci says that frequently the sediments in albuminous urine following a cold bath shows hyaline casts, indicating that the vitality of the renal cell is disturbed, and that a catarrhal or exudative condition results, which is coagulated and molded in the form of a cast.

Posner says that it may be safely asserted that a transitory, intermittent and cyclic albuminuria is not infrequently observed in apparently healthy individuals, but the facts so far brought forward do not warrant the assumption that such forms of albuminuria are physiological, that the occurrence of such an albuminuria unquestionably demonstrates the insufficiency of the renal epithelium.

The association of an increased elimination of uric acid with albuminuria in apparently healthy individuals was noted twenty-five years ago, and recently Dacosta has pointed out the existence of albuminuria with lithuria and oxaluria. Simon says that in almost every case of so-called cyclic or transient albuminuria that the albumen can be caused to disappear from the urine by proper diet and exercise, showing that a faulty tissue metabolism is responsible for the trouble, and he says that there can be no doubt that if neglected granular atrophy may ultimately result.

Aside from acute and chronic inflammatory processes in the widest sense of the word, an albuminuria may be the result of circulatory disturbances in the kidney of whatever kind, the result of hyperemia as well as anemia, provided it is to the extent to influence the vitality of the renal cells. Simon says that it is a question whether or not the albuminuria observed in various infectious diseases is referable to circulatory abnormalities or to direct irritative action of microbic poisons upon the renal parenchyma, we know that it is most frequently transient.

A scanty urine, of high color and density, is usually associated with a deficiency of urea and an excess of uric acid and other by-products, all of which are due to the incomplete oxidation of the proteid molecule. The term accidental albuminuria is applied to a condition in which albuminous products become mixed with the urine beyond the kidney, as in cystitis, urethritis, the menstrua, semen in the urine of men and married women. The microscope is of aid in

locating the source of the albumen, and where it is necessary to differentiate a cystitis from a pyelitis. Besides the presence of renal derivatives to be found in a pyelitis, the albumen in pyelitis is present in about twice the quantity that it is in cystitis of the same intensity. In cystitis the albumen rarely exceeds 15 per cent.

Some of the late authors refer to the occasional occurrence in the urine of an albuminous body, which is soluble in acetic acid, and which Patein regards as a modification of serum albumen. Simon refers to this albumen as Patein albumen, and says that so far it has been observed in only eight cases, and can not be of any special pathological significance, as it was not limited to any special type of disease.

Serum globulin, when found in the urine, is almost without exception accompanied by serum albumen in much larger quantities. It is only of diagnostic value in that it occurs in urine from a so-called amyloid kidney.

Albumose-like serum, when found in the urine, is indicative of certain structural changes in the renal epithelium. It most frequently occurs associated with the accumulation of pus or some suppurating condition of the organism.

It is an accepted fact that a dying white blood cell liberates a certain peptonic ferment, which converts the albuminous elements of the cell into albumose, the peptone of an albumen. In any case in which albumose is found in the urine, the presence of serum albumen should be anticipated; in all cases of albumosuria the amount of albumose is relatively small, and can not, as a rule, be demonstrated by the biuret test.

Bence Jones albumen, a peculiar albuminous body found in the urine, differing from all known albumens in its relative solubility on boiling and in the readiness in which it dissolves in dilute ammonia after precipitation with alcohol. It is of pathognomonic significance in that it is always associated with a multiple myelomatous affection of the medullary substance of bones, most marked when the thoracic skeleton is affected. A pernicious anemia is always associated with this myelomatous condition, and it is regarded as malignant. So here, too, the renal parenchyma is subjected to certain trophic disturbances, and albumen is allowed to escape.

Hemaglobinuria points to an enormous destruction of the red blood cell. When the death of the red cell is so extensive that the liver is unable to transform into bilirubin the coloring matter of the blood set

free, hemaglobinuria occurs, always associated with serum albumen.

Nucleo albumen, an albuminous product frequently seen in so-called functional albuminuria, to a certain extent points to a congested epithelial cell, a catarrhal condition resulting, and the nucleo albumen is the exudative product.

Histon and nucleo histon are albuminous products first demonstrated in leukaemic blood, but since have been found in connection with several infectious diseases. It exists in the leukocyte of the human blood in connection with the acid leukonuclein. Simon says that it is not clear in what manner histonuria is produced.

Albuminuria is always accompanied by casts.

Urinary casts were probably seen first by Vigla and Rayer, but the able investigation of Henle gave to the profession the most complete information as to their character and significance. Urinary casts are and have always been regarded as of the highest diagnostic value of renal change.

Three views are held as to their nature and mode of production. First, that they are the result of the disintegration of the epithelium of the renal tubules; the resulting products are formed into molds by pressure, until at length they slip through the smaller convoluted into the larger straight collecting tubules, and appear in the urinary sediment. Second, that they consist of a secretion of morbidly irritated epithelium, lining the tubules, which become caked into molds, and are washed down with the urine. Third, that they consist of coagulated elements of the blood, which gains access to the tubules through pathological lesions of the latter, and that any free or partly detached products of the tubules become entangled in this coagula, assisting to form the molds of the tubules which subsequently appear in the urine as casts.

The presence of epithelial casts may be taken as positive evidence of a so-called inflammation in the anatomical structures from which they originate, and are consequently sediments of the highest diagnostic value. Bartel states that hyaline casts are formed by a coagulation of the albumen or its derivatives excreted with the urine, and states that they are only present in urine that is albuminous or that has very recently been albuminous. I believe that when we find casts in the urine of any size or form that it is indicative of renal change, and that without an exception albumen is present, though probably in so small a degree as to escape detection.

Numerous observers claim to have found hyaline casts in non-

albuminous urine, while Bartel, Purdy and others claim to have never met with them save in albuminous urine or urine that has recently been albuminous. Purdy says that the disposition of some to regard hyaline casts of the small narrow order as of no serious import is a mistake of the gravest character, for they are often the chief evidence, so far as the urine is concerned, of the existence of the most serious form of renal disease, interstitial nephritis, in which we find albumen existing as a mere trace.

The granular and fatty casts represent to us certain degenerative changes that have taken place in the exfoliated or devitalized epithelial cells from the tubules, and are associated with an inflammation of the chronic type. Blood casts, pus casts, bacterial casts, etc., are merely an incorporation of these elements in the coagula, and are of clinical significance in that their presence thus associated locate their origin.

Frequently associated with hyaline casts is a product of probably the same clinical significance, namely, cylindroids. They are often seen to be continuous, with a hyaline cast at both ends, and must represent at least parenchymatous insufficiency, and are often found in so-called functional albuminuria. Our knowledge of the nature, mode of formation, and their clinical significance is still very defective.

Certain glands of the urinary tract, especially in inflammatory conditions, expel a mold of their structure that we refer to as a mucus cylinder; they are never of renal origin, and can easily be differentiated from a tube cast by their less uniform shape and flat appearance, and response to certain chemical tests.

Glycosuria.—Certain German pathologists have demonstrated that sugar may be encountered in the urine under perfectly normal conditions; that the ingestion of large amounts of sugar is followed by a glycosuria which is not indicative of any pathological condition.

Glycosuria is a symptom that tells us that sugar is existing in the blood above the proportion of 1 to 1,000, as glycosuria does not exist when glycemia is 1 to 1,000. When sugar is eliminated it carries away its equivalent of water of diffusion, which is the proportion of seven parts of water to one of sugar, hence the polyuria and intense thirst in glycosuria. And again in the normal state the lungs and skin eliminate one-third of the water that passes out of the system, while in glycosuria the lungs and skin only eliminate one-twelfth, another source of polyuria.

Robson has demonstrated that the complete extirpation of the pancreas very rapidly causes a glucosuria with polyuria to appear, and

that if a small portion of the pancreas be allowed to remain or transplanted in any other place in the economy, and after its nutrition has become established to remove the pancreas, that sugar does not appear in the urine, but to now remove the transplanted area of pancreas and sugar appears in a few hours time, showing conclusively that the pancreas is not only a duct gland with its digestive ferments, but has a ferment not emptied into a duct, that so governs tissue metabolism that an absence of this ferment allows sugar to appear in the urine in large quantities. So certain pathological conditions of the pancreas that influence its secretion must be responsible for some cases of diabetes mellitus.

Claude Bernard has demonstrated that certain lesions of the fourth ventricle were followed by glycosuria. Certain hepatic vasomotor nerves located in the medulla are supposed to have been irritated, resulting in an interference with the glycogenic function of the liver, as a disordered state of the nutrition of the liver is said to be responsible for certain cases of diabetes mellitus. Sugar is found in the urine following acute infectious conditions, phosphorous poisoning, lesions of the nervous system, and in intestinal toxemias. An ingestion of more carbohydrate and proteid food stuffs than can be converted into dextrose and peptones results in fermentative and putrefactive products, which are absorbed and act as toxins to the economy, arresting normal metabolism, interfering with complete oxidation and assimilation of the carbohydrate radicle that has been absorbed; the liver has to exercise all of its energy to render inert these toxins, and her glycogenic function is interfered with, and we have an accumulation of sugar in the blood as a result of non-assimilation and of a non-conversion into glycogen. A persistent over ingestion of any of the food product proteids as well as carbohydrates will cause certain protoplasmic changes to take place in the parenchyma of the liver, and sooner or later nature, in making an effort to repair this lesion, will develop a cirrhosis, which will be responsible for an hepatic atrophy and death. How often does nature kill us in trying to repair an injury?

Sugar in the urine is pathological, and points to a lesion somewhere. It may be temporary, but nevertheless some cell is suffering.

Leucin and tyrosin, products never found in the urinary sediment under normal conditions, and of pathological significance in that they are found in large quantities in acute yellow atrophy of the liver, not found in the urine in phosphorous poisoning and absent in diabetic urine. Leucin and tyrosin seem to be especially associated with patho-

logical conditions of the liver, and with the incomplete oxidation of the proteid molecule, and more especially an incomplete conversion of proteids into peptones for absorption. The bacteria of putrefaction in the large intestine finish the disintegration of these substances, and leucin, tyrosin, together with indol skatol and xanthin products are the result.

From careful examinations of the urine we realize that we are constantly living under the chance of being poisoned. As Bouchard says, we are working toward our own destruction, we are making continual attempts at suicide by intoxication, and that it is to the liver that we are indebted, for it is a safeguard between the alimentary tract and the vital centers. When the liver is seriously damaged, the repair of the waste of tissue is interfered with, and there is an accumulation of disassimilated products, which have not been converted into a state for excretion. The proteids no longer reach the state of urea; therefore the urea is diminished, and urea is the most important physiological diuretic, forcing the water to pass away through the kidneys, and to carry off at the same time other solid excrementitious matters, an accumulation of leucin, tyrosin, xanthin and hypoxanthin is produced in the blood and in the tissues, and we find them along with albumen in the urine. The liver is incapacitated, and is unable to form the pigments and biliary acids, bile disappears from the urine, and if the patient had been suffering from a cholemia the jaundice clears up, the liver being unable to make bile.

I think that in making a urinary examination that it should be examined more with the idea of determining whether or not the liver is doing its work than to recognize a kidney lesion, for it has been demonstrated time and again that an anesthetic can be given in almost any form of nephritis, provided the hepatic function is normal; and with a perfectly healthy kidney when the liver action is defective, time and again have all of you observed a toxemic state develop, urea disappear from the urine, and a suppression follow, and all of the symptoms of urinary intoxication appear.

LOUISVILLE, KY.

GYNECO-PATHOLOGY.*

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The subject of gynec-pathology is one of extreme importance alike to the general practitioner and the gynecologist. It is important to know and realize its scope and limitations; what can be undertaken with reasonable prospect of cure in a medicinal or surgical way; what can be undertaken with the idea of modification or limitation of the pathologic process, and what can be done in the way of preventing gynec-pathology. Thus the subject of my discourse falls naturally into three divisions: preventive, palliative, curative.

PREVENTIVE.

Let me state here a great principle in gynecologic practice, *i. e.*, with a maximum of prevention will we find a minimum to cure *et vice versa*.

This involves one, two or three persons, individually or collectively. It devolves upon the wife alone, the husband alone, the doctor alone, or upon the wife and husband together, the woman and doctor together, or the husband and doctor together, and occasionally the combined effort of the three to prevent that train of processes which result so disastrously to the wife.

How may it depend upon the woman alone? I can not hope to detail all under this head, but to enumerate a few, emphasizing some and merely mentioning others.

THE CORSET

has many times been brought to your attention, and doctors have talked learnedly about that article of dress, and condemned it to unmerited oblivion. Were we all Beaux Brummel we might talk authoritatively upon this subject. In my humble opinion it is utter foolishness to advise a woman to do without a corset. If we could find a race or family who for generations have not made it a practice to wear that article of support all their lives it might be sound advice; but when a woman's mother, grandmother and great-grandmother have all been accustomed to that assistance, so must she continue to wear it. You take a woman's corset off and how she complains of the backache,

* Paper read before the University Society of Physicians and Surgeons.

especially if she be much on her feet. The only limitation I care to put upon the practice is to instruct them to take it off while in a recumbent posture, and during the day to wear one that fits her not tight but snugly. Advise her to take a little off of the heel and put it around the waist.

WARM CLOTHING.

It goes without saying that a woman should be warmly dressed in winter. When the clothing is inadequate the oxidation of food substances is primarily for the production of heat and not for tissue formation, which takes a second place. Thus, while they do not complain of feeling cold, it is because they are burning up a multiple quantity of fuel, with a rapid accumulation of waste, and these seeming insignificant things may start the leak that will eventually result in disaster. Nowhere in medicine, so well as in gynecology, does the old adage hold good, "For the want of a nail the shoe was lost." But if a woman is going to take off flannels at Christmas and put on a low neck party dress, she had better wear mosquito netting for underwear all winter long.

DRAWERS.

Doctors are expected to know more about this article than they do about corsets. When I consider the anatomy of this apparel I marvel much why they wear them. They come under neither one of the three heads: the true, the beautiful or the good, and anything that I can not classify under one of these heads I consign to the "scrap pile." Let me draw a picture for you in order to illustrate my meaning. I see three ladies walking along the street; one has on a pair of open drawers, another has on a pair of closed, but with legs eighteen inches in diameter, while the third has on a snugly fitting pair of closely woven material. As they walk along the skirts brush the street and raise a perfect cloud of dust that ascends, is directed by the cone formed by the skirts or drawer legs, and except in the case of the third lady there is nothing to prevent the germ-laden particles from soaring right into the Elysian fields of bugdom. Thus the staphylococcus, the streptococcus, the tubercle, the anthrax and all the hellish legion are deposited where there is an abundant soil and a perennial season, to say nothing of the dust, dirt, sand, sputum, tobacco, lime, hair, coal, ashes, horse manure and other particles, too numerous either for me to mention or you to listen to, that are deposited and stick to the secretions, thus making a mixture that is highly irritating to that sensitive

region. A good maxim to pass current among women would be to wear tight drawers to keep from losing your tubes, and cut off the tail of your skirt, and patch up the front of your drawers.

ABORTION.

O! that woman never had the desire to abort. Could they but know the disastrous consequences, suffering and sterility, with its late mental anguish, it would cause them to hesitate. One great source of gyneco-pathology, and one of the great causes of abortion, is too early marriage. No girl should marry. That privilege should be reserved for women. A female should not marry until she feels the maternal instinct within her. When a girl marries she usually says, "I want to have children, but not just yet." She usually specifies both the number and the sex, as if they could control these matters. Ah! but they do control them. There is the trouble. They taste the fruit, and when they find themselves *eniente* they say, "I will get rid of this one. We don't want any children just yet, do we, Hun?" and "Hun" says, "No; after awhile we do, but not now, I think, do we?" "No, indeed, we will pluck this one, and let the next one grow." But how many times there is no next one. So off she goes to her doctor, or, what is worse, to some other doctor, and if she don't get relief she consults her friends, and if the "fool friend" don't do it for her, she usually gives her instructions, and then —. But why proceed? You know the result that often follows. Inflammation, sterility, and six, eight and ten years from then that woman would give her interest in heaven to become pregnant. The maternal instinct has awakened in her to find that she had married too soon. How she watches the time for menstruation. How happy she is if it is delayed—how depressed with its tardy return. How she cites the case of Mrs. So and So, who was married six, eight and twelve years, and then had a baby.

CLEANLINESS.

Personal cleanliness is essential to the welfare of a woman, but I want to condemn too frequent douching of the vagina. I feel like saying to women, let your vaginas alone, and we might instruct the doctors likewise. The vaginal secretions have an acid reaction, due to lactic acid fermentation, produced by a bacillus that has its normal habitat in the vagina. This acid reaction is inimical to the growth of pathogenic bacteria. Now frequent douching, as many women practice, washes these bacteria out and destroys the acidity, and conditions are now such that infection may occur.

THE MENSTRUAL PERIOD.

A woman should know and realize the importance of caring for herself during these days. Total sexual abstinence should be enjoined upon her. Among other important things for her to know is how properly to receive and dispose of the discharge. Some women allow it to run upon their clothing without any special way of caring for it. Some women put on any old dirty rag that comes handy. Some use regular napkins that are washed, boiled and kept clean. Some use pads of sterilized cotton, and then burn the pads. And I have known women to stuff the vagina full of cotton to keep from being annoyed by a napkin. A clean napkin that has been washed, boiled and ironed should be applied with a pad of aseptic absorbent cotton interposed between the napkin and the vulva. This pad can be frequently removed and burned, and the napkin changed daily. I have attempted to enumerate and bring to your attention a few of the things that devolve upon the woman which may in one way or another affect her health and happiness. Your several experiences as doctors will, no doubt, supply others. I will now turn my attention to that other *particeps criminis*, the husband, leaving the doctor till the last.

HOW MAY IT DEPEND UPON THE HUSBAND ALONE?

How many a husband is responsible for his wife's ill health. That question is, indeed, a poser. But we, as physicians, know and realize his importance as a factor in the subject at hand. It is in vain that we attempt to make them realize the fearful responsibility resting upon him when he takes a latent gonorrhea to an innocent wife. We may preach it to them, and each succeeding generation will witness the same occurrence. It seems that all we can do is to deplore the fact. Have you ever noticed how anxious the husband is to see the doctor when he thinks there is anything wrong with himself, and how reluctant he is for her to see the doctor when he thinks she has developed symptoms. He goes post haste, at the very earliest possible moment, while she is sent at the latest possible moment. Not that they love their wives less, but that they tremble at the consequences more, and the longer they tremble the greater will these consequences be. For is not the disease progressing rapidly all the time?

As I have advised late marriage for women, so will I advise early marriage for men. They don't necessarily have to wait for the paternal instinct. That will always be there on the arrival of the stork. An early marriage will usually give the man an early offspring, and that child becomes a wonderful factor in holding its sire in the narrow path

of virtue. I believe firmly that the desire for abortion after marriage lies from 90 or 100 per cent. with the young wife, while the husband is indifferent to the matter.

Personal cleanliness is essential to the health of his wife in a gynecological way. His person should receive strict attention in this respect. What a great breach of technique it would be for the physician to introduce a finger into the vagina without sterilizing it. Every man among the laity should learn at least enough of bacteriology to know what a stab culture is.

Dr. James B. Bullitt says: It has long been known that the best method of sterilizing the hands is to boil them, but as that is impractical we use rubber gloves. The suggestion is apt: a judicious use of **rubber gloves in selected cases is a great thing.**

The primary use of rubber gloves in secondary cases may prevent tertiary symptoms. How many men have infected their wives before they realized that they themselves had become syphilitic. They can scarce believe the evidence of their senses. It is another case of Doubting Thomas, and let us remark right here when in doubt use rubber.

What I had in mind more especially was that the secretions about the corona are liable to outlive their period of usefulness as lubricants, and undergo a decomposition, with resulting fatty acids. These acids deposited upon a sensitive mucous membrane may cause a pruritus, and God alone knows what that may lead to.

A man is wonderfully blessed with a wife that is not a stranger to work, but a man may be a party to her ill health when he unthoughtedly permits her to overwork herself. Some women are born literally with a broom in their hands, and all hell couldn't stop them. But many women do work that is beyond their strength, and the husband never perceives it.

AND NOW AS TO THE DOCTOR.

It is useless to enumerate to this body how the doctor may cause these conditions. I would not so insult your understanding.

How this factor has changed from one of a great causative agent for bad to a ministering angel of prevention by the modern asepsis that we are taught to practice. What knowledge, appreciation, conscientiousness on his part at labor, in abortion, in technique of treatment and operation; what decision and judgment is called for so often. How must he face the situation many times, not asleep, but eyes awake to all the conditions of his case. Many times must he be bold and

fearless in his treatment of complications, and "by opposing end them." It is with pride that I say the medical profession is having less and less to fear from the medical profession.

PALLIATIVE.

Under this head comes as a classification cases that are inoperative temporarily, permanently inoperative from complications and incurable. All other cases come under the head curative, which will be dealt with next. Many times do we meet with conditions that are temporarily inoperative, not so much from the nature of the disease as from the effects that disease has already produced upon the health of the patient, from complications of heart, lung and kidney that strongly contra-indicate the only measure you may rely upon for the permanent relief of your patient. Shall we not use palliation here? By way of illustration, would it not be better to use astringents or even the tampon in a menorrhagia with renal complications until such a time, with proper attention to these contra-indications, as they may either be removed or modified to such an extent that you may safely undertake to carry out your measure? I say would not this be eminently better than to shut your eyes and risk all on a single throw? If these things be so, are we not still more justified and called upon to palliate those incurable affections of which women have more than their share?

THE CLASS CURATIVE.

And now as to the class curative. I wish to come down from dealing in generalities and the abstract, and be somewhat more specific in dealing with conditions that we may undertake with a reasonable hope for a cure. This brings me face to face with the subject of "Medical Gynecology and What It Offers."

Gyneco-pathology has its origin in any one of seven different conditions, *i. e.*, inflammatory, hypertrophic (including tumors), fertilization of the ovum, malformative, traumatic, mechanical and physiologic.

All inflammations should be treated in a medicinal, palliative way during the stage of active inflammation more with the idea of preventing the spread of the process to other structures than to reduce the severity then existing. Thus vulvitis, vaginitis, vulvo-vaginitis, eczema-vulvae, herpes-vulva, pruritis, hyperesthesia, vaginismus, acute metritis, pelvic peritonitis in the acute stage, salpingitis acute, and urethritis come properly within the domain of what can strictly be called medical gynecology, while their end processes are strictly surgical. The work of the department of medical gynecology is to attempt to prevent these

end processes, which might be summed up under the one word, abscess. It is not my intention or is it necessary for me to go into the treatment of these conditions. The principles are too well known by you, and I will dismiss that subject with a few words. Let the principles of treatment always guide you. You will then become at once a man of resource, and will be able to command not one but a dozen remedial measures for each individual case.

In all cases we are to have "a clear indication and definite appreciation of what the application is to accomplish." Also we should remember at all times that the medicament should be made to exert its influence upon the inflamed tissue direct, and not exhaust itself upon the secretions that cover and protect the tissues.

TISSUE GROWTHS.

The department of medical gynecology with this class of cases should exhaust itself in diagnosis. The all important thing in this field is to recognize a surgical condition when you meet it. This is imperative. It matters not whether the name be John, Bill or Susan, so long as you recognize the Smith family. These are grounds consecrated to the surgeon, but many women would suffer all their days and be brought to a premature grave were it not for the wisdom and knowledge of their best friend on earth—the family physician—who, like old Dr. McClure, created immortal by Ian McClaren, who, when he met a surgical condition in Tamus' wife, although he recognized it and knew the treatment, which was beyond his power to carry out, he called in the surgeon of the Queen, and the woman was saved.

FERTILIZATION OF THE OVUM

gives rise to gynecologic conditions only under the so-called accidents, where there is some interruption to the normal progress of the fecundated ovum toward the uterus, resulting in ectopic gestation and final rupture of the tube. Nowhere in medicine is there a picture that the doctor should recognize quicker than a ruptured tube. The sudden pain, fainting, pallor, signs of shock, rapid pulse, lowered temperature, history of pregnancy, bleeding from the uterus, presence of a hematocoele felt upon vaginal examination, and you have the picture. Here, again, is the presence of the surgeon demanded.

MALFORMATIVE.

It is much to be regretted that every school in the land has not a chair of embryology and development. Unless a man knows how the different organs are developed, know, the life history of a liver, a

kidney or a vagina from the moment of conception until the adult type is reached, how can you reasonably expect him to recognize a hypospadias, an epispadias, gynetrisia, uterus rudimentarius, duplex, unicornis, bicornis, defectus, infantilis, or a persistent cloaca.

TRAUMATIC.

These conditions primarily concern the general practitioner, for they are chiefly brought to his notice first, and in the matter of pueperal traumatism he usually presides. He must then become the surgeon, and as far as within his power repair the damage at once. All traumatisms not of recent origin are strictly within the domain of surgery.

MECHANICAL.

Here have we at last disputed territory, where there is a battle royal between the knife and pessary, between ventral fixation and the knee-chest position. Each has its claims and well supported. The surgeon can no more correct all the mechanical causes of gynecological conditions than can the general practitioner by medical means and mechanical device. We will here make a division of the spoils by placing the recent cases, the cases of slight degree and those due to temporary physiological processes, such as bladder distention and fecal impaction, to the medical department, and reserve the chronic and long standing. Flexions and versions, downward and lateral displacements, with stenosis, to the surgeon.

PHYSIOLOGIC.

Under this head we again allow the medical department to take the initiative, with premature menstruation, protracted menstruation, amenorrhea and scanty menstruation. The surgical faculty has very little to do here except with mechanical dysmenorrhea and some forms of metrorrhagia and menorrhagia.

I have thus endeavored to review the subject of gynecology somewhat in the abstract in order to call attention to those things which may be treated with reasonable hopes of success, with or without the aid of the surgeon (and I want to emphasize the fact that even the country practitioner need not confine himself to measles, pneumonia, typhoid fever and death certificates, but may devote considerable time and attention to the field of gynecology, and find therein many conditions worthy of his steel).

Progress of Medical and Surgical Science.

But One Cause of Appendicitis.—Dr. D. A. Stapler, *California State Journal of Medicine*, discusses the many theories as to the cause of appendicitis, and finally concludes with the assertion that infection is the one cause; that all other conditions are only predisposing causes. He states that it is possible for a grape seed, fish bone or some other foreign material to get into the appendix and produce trauma, thus opening up an avenue for infection, and an acute inflammation of the organ is the result, thus giving us our initial attack. If the blood supply is good a round cell infiltration takes place, and the infected area is walled off. Nature has repaired this lesion with new tissue which very soon forms fibrous tissue, which constricts the appendix and so compresses the artery of the appendix that the distal end of the organ suffers nutritional changes, the vitality of the cells is lowered, and a very rapid gangrene takes place, and frequently nature is unable to throw up a protecting wall, and a general peritonitis is the result.

Little difference does it make what the primary offending agent is, the only role that it plays in the production of appendicitis is to lower the vitality of the cell allowing the ever present bacteria to gain entrance to suitable pabulum and grow, the result of which is inflammation. Fecal concretions are forced into the lumen of the appendix, a peristalsis is set up, the foreign body is forced farther into the appendix, and by its pressure against the walls of the organ shuts off the blood supply and cellular death takes place, infection follows, and an inflammation is the result. If the bacteria were absent the organ would slough off up to the point of obstruction, and nature would soon repair the injury. Dr. Stapler closes by saying that appendicitis is caused by loss of tissue with subsequent infection. This loss of tissue can be caused by capillary hemorrhage due to infectious diseases or by over exertion or by foreign bodies. No appendicitis without infection, no infection without loss of tissue.—

Aural Complications in Measles.—By Frank Gray, M.D., Fort Worth, Texas. The author believes that the possibilities of the involvement of the middle ear in measles are not thoroughly appreciated.

and urges a more careful study of these cases. He calls attention to the many cases of chronic otorrhea whose beginning is known to be synchronous with an attack of measles. While some of the middle ear inflammations may subside in a few days without impairment of function, there are quite a number which are followed by a prolonged, offensive discharge, or mastoid inflammation, with any one of half dozen fatal complications, may follow. The ear complications in measles are, in the author's opinion, nearly all dependent upon pre-existing unfavorable conditions of the naso-pharynx, and he attaches importance to the removal of adenoid tissue from the naso-pharynx as a prophylactic measure. After the ear inflammation has taken place it is too late to talk of adenotomies, and every effort should be made to relieve pain. He does this by the local application of morphia and atropia, and the conscientious application of dry or moist heat. Leeching and cupping before and behind the ear is also advocated. Failing in the relief of the pain, a free incision of the drum should be made. Gray claims to be able to do this painlessly by allowing 15½ drops of a 10 per cent. solution of cocaine to remain in the ear canal seven to eight minutes before the operation. When once good drainage is secured the pain abates, and the danger of mastoid and other complications is materially diminished.—*Fort Worth (Texas) Medical Gazette*, March, 1904.

Killian's Radical Operation for Chronic Frontal Sinusitis. By A. Barkan, M.D., San Francisco, Cal. The method of Professor Killian (Freiburg), while not an improvement over some of the other methods of operation for the cure of the sinusitis, gives much better results from a cosmetic standpoint. Killian has recognized that the cure of chronic frontal sinusitis can be brought about positively only by sacrificing both the anterior and inferior wall of the sinus. A skin section is made along the brow, extending from near temporal extremity, running along the side of the nose to the inferior orbital edge. The anterior and inferior bony walls of the sinus are then resected separately, leaving the orbital edges intact. This is cosmetically of greatest importance, and it is the distinguishing feature of Killian's operation. An opening is made into the frontal cells in most cases, and resection of the frontal process of the superior maxilla practiced, thereby opening up the ethmoidal cells, which are nearly always diseased. The anterior extremity of the middle turbinate is always exposed, and if enlarged can readily be removed, and a large communication established between the sinus and the nose.—*California State Journal of Medicine*.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

PRESENT STATUS OF ANTI-STREPTOCOCCUS SERUM IN TUBERCULOSIS.

For a number of years the profession has recognized in tuberculosis a disease of mixed infection, and that the marked symptoms that developed during the course of the dreadful trouble were the result of mixed infection and usually of the pyogenic variety, and the streptococcus bacteria in particular. It is so common for us to have mixed infection that some authors have placed the per cent. as high as 60, and it is this one thing that has prevented tuberculin serum from being a success, the tubercle bacillus being only the exciting cause in producing the symptoms complex that afterwards present themselves.

In anti-streptococcus serum as a treatment for the disease, we have a remedy that acts, not as the anti-diphtheritic by being anti-toxic, but acts by antagonizing the germ itself, or what is known as bacterio-

lysis, and in those cases where we have high fever, rapid emaciation, distressing cough, free expectoration, which shows on examination to contain streptococci, we have in the above serum a remedy that after a few doses, say eight or ten, something that will begin to control the cough and at the same time the fever, and where the patient was running an evening temperature of three or four degrees, it will rapidly fall to or near the normal, the patient will, of course, rest better at night, the appetite will improve, and as a result the patient will not only gain strength, but will increase in weight.

In using the serum it should be given in 10 c.c. at a dose by hypodermic method, and used every day until at least sixteen to twenty doses are given, unless the patient shows a rash, etc.; then it should be left off for a day or two and commence anew. If you are using it every day the effects will begin to show about the tenth day, and continue to be more marked as the treatment progresses until a patient that was coughing quite a great deal and expectorating free and running a temperature will, in the period of twenty days, have little cough, slight fever, and appear to be very much improved. This lull in the trouble may last for a number of weeks, and the cases under our observation, which were rather far advanced in the disease (and in those of other men from which reports have been made where the disease was taken at all stages), show that this apparent gain in the patient will continue for from one to five or six months; then the patient seems to lose this stimulating influence of the serum, and a rapid decline takes place, a dissolution of the patient seems to occur.

It seems, then, that the serum is indicated in all cases of tuberculosis where we have a mixed infection, and some good will be had from the use of it, but too much must not be expected from it, and because the patient does well for awhile does not justify us in holding out too much hope to the family.

VITALITY OF GERMS OF DIPHTHERIA FOR A LONG TIME.

A health officer in Mecosta county reports to the Secretary of the Michigan State Board of Health that twenty years ago Mrs. T. lost a daughter by death from diphtheria, and then some of the girl's clothing was put away in a chest and nailed up. The chest was not disturbed until this spring, when the mother, seventy-five years of age, opened it and looked over the clothing, soon after which she was taken sick

with diphtheria and died June 17, 1904. The health officer believes she contracted the disease from the clothing infected twenty years ago.

EDITORIAL NOTES.

The Jefferson County Medical Society met at the Galt House Wednesday, June 29, 1904, for its eighth stated meeting. The afternoon session began at 3 P. M. and the evening session at 8 P. M., with a banquet at 10 P. M.

The officers are: H. H. Grant, M.D., President; Jos. Hopson, M.D., Vice President; Sidney J. Meyers, M.D., Treasurer; and Henry Enos Tuley, M.D., Secretary.

Papers: 1. "A Case of Splenic Leukemia Treated by X-rays," by J. T. Dunn, M.D. 2. "The Non-valvular Affections of the Heart," by Jos. B. Marvin, M.D. Also interesting reports of clinical cases and specimens are expected.

An Impediment to the Production of a Rattlesnake Antivenin.—

The researches of recent years have shown that the poisonous principles in the venom differ in different serpents. Thus, the active principle in cobra venom is a neurotoxin, while that of the rattlesnake is a substance which destroys the endothelial lining of the blood vessels, allowing the escape of blood into the tissues; technically speaking, a hemorrhagin.

The effect of this hemorrhagin on the tissues is intensely destructive and the extensive local necrosis resulting from its introduction has interfered up to the present with the immunization of animals to rattlesnake poison.

This disagreeable effect is being overcome by experimenters, and the hemorrhagin is retained in a form which is able to set up reactive processes in the animal body, with the resulting production of an antivenin; and it is to be hoped that very soon we will have a reliable rattlesnake antivenin on the market.

Society Proceedings.

LOUISVILLE CLINICAL SOCIETY.

Regular meeting at Seelbach's Hotel, Tuesday evening, June 14, 1904, with the President, Dr. J. W. Irwin, in the chair.

FRACTURE OF FEMUR, WITH UNUSUAL METHOD OF APPLYING EXTENSION.

Dr. Ewing Marshall: This man fell the first time on the 5th of January, and made a fairly good recovery from a fracture of the femur about the junction of the middle and lower thirds. In the eleventh week his crutch flew out and his left leg doubled under him, and broke the second time about the same place. The results are fairly good, but I want to speak of the method employed in making extension. I first applied Buck's extension for some weeks, and then put on plaster without the assistance of any one to hold the leg. I cut out the sterile part of the adhesive, punched a hole in it, and tied it with a stout cord to hold it out of the way. I brought the cord over the plaster, and put on a dry dressing over this, after attaching the cord under the foot, attaching a twenty-pound weight over a pulley, thus making the extension of the leg, with the body elevated on a platform. It is now twelve weeks since the second accident. I have never heard of this method of making extension while applying the plaster, without a human extender.

Dr. Irvin Abell: Dr. Marshall is to be congratulated on the result; it is almost impossible to tell by palpation where the fracture occurred. I would heartily endorse his method of dressing with the Buck's extension. A number of excellent men advocate the use of plaster of Paris as a primary dressing, and I have used it as such in four cases, with ideal results in three. In one case I found the leg two inches short, Buck's extension not being used, since then I have invariably employed the Buck's extension as a primary dressing. I think this method should be used for the first three or four weeks to overcome the tendency to overriding, after which plaster of paris is to be used until union is firm.

Dr. G. W. Griffiths: I am very fond of the simple plaster dressing. It does not make any difference how the extension is made. I make

extension, and apply the old fashioned plaster of Paris with a spica, pulley, etc., using no other treatment. I have the foot of the bed elevated, and use the proper amount of weights with the body as counter extension. If the proper amount of common salt or alum is added, the plaster will harden promptly and uniformly, so that manual extension is not needed very long.

Dr. W. Ed. Grant: Personal experience makes me differ from the last speaker, for I think the patient gets more comfort from the method of Dr. Marshall. The other method keeps the leg firmly fixed in one position, and before I got through with it I was nearly ready for the insane asylum. It is torture to lie in one position for a number of weeks, and I have seen cases get along in comparative comfort where the extension was used.

Dr. Geo. W. Griffiths: It is of the greatest importance in the application of the plaster to have plenty of cotton batting and a *firm* primary bandage on the top of that. Unless this is done you will have trouble in a few days when shrinkage of the limb and plaster occur. If this primary bandage is applied as tightly as it can possibly be done, confining all the joints in this way, you will have no trouble as to the outcome.

Dr. John R. Wathen: This is an ideal result in an unusual case, and I think it is a case for study with radiography. Since I have been making careful radiographs of all my fracture cases, my ideas of fractures have been undergoing a change. Plaster of Paris is a very tempting bandage to put on, but if you will examine it carefully after the swelling has gone down, or cut a section through the center and take up the slack, you can not fit the limb again. The approximation of bone is not good after swelling subsides, and the only thing to do is to make a new plaster application. I have watched it by means of radiographs, and it is not a suitable dressing except in a few cases. The consensus of opinion of most surgeons who make these radiographs is that plaster is not a satisfactory dressing. I am losing faith in it.

Dr. F. W. Samuel: The result is all that could be desired. I think the treatment of fracture resolves itself into the location. In this location the double-inclined plane, with Buck's extension, gives excellent results. I know of no dressing so perfect as the plaster of Paris dressing in fractures of the leg from the middle of the thigh downward. When confined in hospitals, Buck's extension is excellent for the first two or three weeks, and after the plaster is adjusted, the patient can go about on crutches, and nutrition is favored. My method

of using the plaster is to incorporate in it a malleable iron rod, and thereby keep up the extension. It is a well known fact that plaster expands as it hardens, which takes up the space. I like as little dressing as possible, and follow the Bavarian method of applying it in layers. One great mistake in putting on plaster is attempting to put it on with a great deal of beauty. It should be molded to the leg, and in a few minutes it will set sufficiently to hold it in position. Oblique fractures are very hard to maintain in position, and a slight amount of shortening in the thigh is not a disagreeable effect.

Buck's extension must be watched as closely as any method employed. There is not a moment when it must not be watched. The most important thing is the position in which the limb is placed; it must be well abducted. In this way you prevent the bowing which is a common result.

Dr. M. F. Coomes: I was much struck, some weeks ago, at the meeting of Southern Railway surgeons in Atlanta, to see how many of them condemned the plaster dressing in the treatment of fractures of the femur. Most of them advocated Buck's extension.

Dr. M. K. Allen: I congratulate Dr. Marshall on the results. No matter what method is used if you get the results; that is the thing, and sandbags will sometimes do this.

Dr. Marshall (closing): So many times, in extending the leg myself, I have found it extremely difficult to keep it extended properly to the end, and my hands were constantly in the way of the surgeon applying the dressing. Just at the most important moment the back gives out or the hands slip, and when you want most to make the extension, you fail. I have considered the plan of putting on the plaster up to the knee before making any extension at all, because then is when you want it. A twenty-pound weight holds the limb in perfect position, with the body elevated on a platform. I have not had any radiographs made, and do not know the relation between the ends of the bones, but I take it that it was an oblique fracture, and I do not believe that putting on a plaster right away would have gotten such results as followed the use of Buck's extension.

X-RAY IN EPITHELIOMA.

Dr. M. F. Coomes: I want to make a continuation of my report at the last meeting. You will recall the case of the man with the eyelid involved, in what appeared to be a mild form of epithelioma. The growth was so situated that its removal with the knife would of necessity produce very great deformity as most of the lower lid would have

been removed by the operation. It was on this account that the X-ray was recommended as a means of getting rid of the growth. At the end of the sixty days treatment it seemed that rapid recovery would occur, but soon after this the growth assumed a more malignant form and began to invade the neighboring tissues. At this time he asked permission to go and see Dr. Dunn, who was a relative, and I readily gave my consent. It has now been nearly a year since I first saw the case. It will be a month next Thursday since I removed everything from the orbit, cutting away the best portion of both eyelids on that side. I cauterized everything thoroughly with a Paqueline cautery where the disease had invaded the bone, the outer surface of the bone was thoroughly charred. He returned a week ago with a growth as large as a small sized almond just inside of the orbit; this growth was readily removed with a curette and came out enmasse, and appeared to be enclosed in capsule. It would seem that the case is one of great malignancy, since, in twenty-one days, a growth of this size has appeared after curettement and cauterization.

I want to report another series of cases. Eight months ago an old lady was brought to me with an immense goitre, which interfered with her circulation so as to produce severe headaches. I had no idea that the X-ray would relieve her, and made the application more to satisfy the patient than anything else; but strange to say, after about ten sittings, she said her headaches had ceased. After about sixty days the circumference of the neck was reduced three inches, and she could sleep at night with little or no difficulty, whereas before she slept but little.

A second case had great trouble in breathing while in the recumbent position, making it almost impossible for her to sleep, and after six or eight applications of the X-ray she could sleep all right and breathe without difficulty.

I am unable to explain how the X-rays bring about the changes noted, but report the clinical facts as worthy of attention, since there is no other method of relief in such cases, as they are practically inoperable. Neither of these patients had exophthalmus.

Essay by Dr. E. S. Allen: "Pathological Products of the Urine and Their Significance." Under original articles this issue.

DISCUSSION.

Dr. Carl Weidner: I noted some discrepancy as to the amount of urea. Most physiologists give the quantity higher than the essayist, a little over an ounce. The liver is the organ which manufactures the

urea and the kidney the separating organ, so it is important to consider the amount. I agree that this is one of the most important considerations, for it is the amount of urea and the combination of pathological elements present that give us a clew to the condition of the kidneys. I have had a number of instances where examination showed a small amount of albumen, with casts in very small number, and a constant diminution of urea. These are the most dangerous cases. On the other hand, I have had men with albumen continually in the urine and also casts, but the amount of urea practically normal, and they feel perfectly well. My prognosis is based upon the combination of pathological elements and the amount of urea excreted.

Can we have a urine that shows casts and gives no albumen reaction? I took the affirmative standpoint in a paper some time ago, having seen instances of that sort. I have seen cases reported by various authorities, showing casts without albumin.

As to the significance of casts, I have always held them to be abnormal products, indicating either a temporary or permanent derangement of the kidney. If we find any variety of albumen and these casts, we should be on the lookout. Frequent examination and quantitative urea tests should be made. I have cases with hyaline casts practically transitory in character; they are present in every case of jaundice and in typhoid fever and diphtheria, but should never be disregarded when found. Most of the urine of pregnant women will show albumen and hyaline casts. Cylindroids, which resemble hyaline casts, have the same significance as hyaline casts. The so-called false cylindroids possibly come from other parts of the urinary apparatus, and are different in appearance, *i. e.*, more irregular in shape, striated, and give the nuclin reaction.

I have never heard a surgeon make a report of finding Bence-Jones albumin in this city. There have been a number of cases reported where this *albumose* has been found in the urine. Large quantities are found in the so-called myeloma of bone (*i. e.*, round, called sarcoma of bone marrow), but it has been found in other diseases, in osteo malaria, myxedema and chronic suppurations. Some of the simplest tests for albumin are: 1. Its precipitation by strong nitric acid, dissolving on boiling and reappearing on cooling. 2. Coagulation at a temperature much below that needed for serum albumin or globulin (50° to 58°C).

Dr. M. F. Coomes: The kidney may be very badly diseased without much evidence found in the urine. I recently examined a man with a typical Bright's Disease eye, only able to count fingers with one eye

and with a vision of $\frac{\infty}{200}$ in the other. The only peculiarity about his urine was that it was light, but ordinary; heat test revealed no albumin. He was apparently well, and complained of no trouble except loss of sight.

Dr. John R. Wathen: I think careful distinction between many of these end products is an extreme, for they are simply stages in the metabolism, and any one of them is sufficient to point out pathological conditions. It was new to me to hear that hippuric acid occurs in ordinary urine, for I thought it was normally found only in the horse.

As to lucine and tyrosin in connection with yellow atrophy of the liver, ten years ago I was assistant to Prof. C——. He asked me to examine a specimen from one of his sons, and these products were found in large quantities. The boy made a recovery, however, so the cases do not always result fatally.

I have never found tube casts without albumin, but I have often seen albumin without casts. Some German chemist has reported a number of casts without albumin, but I have never seen one.

Dr. W. H. Wathen: Recently one of our prominent citizens consulted Dr. Janeway, and his urine showed a specific gravity of 1014, with traces of albumin and hyaline granular casts, with a blood pressure 25 per cent. above the normal and enlargement of the heart. He returned to Louisville, and Dr. John R. Wathen examined the urine on several occasions at intervals of a week. The average specific gravity of all the urine passed in twenty-four hours was 1013, without trace of albumin or granular casts. While in Atlantic City the other day I consulted Dr. Janeway about the case, and he said his analysis had been made from a small amount of urine passed in the office, and sedimented by centrifugal process. I asked him if the presence of hyaline granular casts was positive evidence of chronic interstitial nephritis and he said no; that they were frequently produced by excessive nervous and muscular work. He remembered one man who consulted him twenty years ago with hyaline granular casts, who is still in the same degree of health, who can produce these casts on exposure. For examining for hyaline casts, he said it was better to take urine after the patient had been exercising physically or mentally. I cannot myself see any difficulty about having hyaline casts without chronic inflammation of the kidney, and am sure they be brought about by interference with the blood pressure, but I would ask if the granular casts may be seen in urine from a kidney with no chronic interstitial nephritis.

Dr. P. F. Barbour: I always look upon hyaline casts with suspicion, and where they are found from time to time it is evidence that something is wrong. In scarlet fever with this intense albuminuria I have found only hyaline casts in the urine; under these circumstances they are only functional derangements. Whenever I find granular or epithelial casts in scarlet fever, I know the condition is further down in the tubule. Whenever the hyaline casts are large it is evidence that a certain part of the cells of the tubulé have been lost and the kidney is in a critical condition, and can not stand much tax upon it. Hyalines are the only casts I find in the urine that do not make me anxious. The other forms show disease of the kidney, and I think may, with hyaline granular casts, stand a good chance for nephritis.

Dr. Irwin Abell: Like Dr. Weidner, I feel that the amount of urea taken in connection with the presence of albumin and casts give a better idea of the condition of the kidney than any separate element. The majority of authorities think there is no such thing as physiological albuminuria. I have under observation a patient operated on three years ago, with traces of albumin. He still has it and is in perfect health; he was cognizant of its presence two years before coming under my observation.

Experience in stripping off the capsule of the kidney shows to me that either our methods of diagnosing chronic Bright's Disease are wrong, or else there is some other condition which will produce these pathological products in the urine. I can not see how removal of the kidney capsule can overcome an interstitial sclerosis, yet these gentlemen give you urinary findings which are recognized as indicating organic changes in the kidney. Experiments with animals show that after removal of the kidney capsule it is reproduced, being tighter and more contracted than before.

Dr. W. Ed. Grant: I agree with the essayist that albumin in the urine is always pathological. If the cells which line the uriniferous tubules are intact albumin is never present. The diseased condition may be only temporary or may be organic. We have been a little inclined to jump at serious conclusions whenever albumin was found in a patient's urine, and I would not discourage the patient unless there were other findings which indicated a grave complication, because the trouble may be only temporary.

Dr. W. H. Wathen: I have taken a great deal of interest in this question since Dr. Edebold began his operations. I have had considerable kidney work for many years, partially stripping the kidney

of its capsule in fixation. Dr. Edelbold talked to me about his operation and anticipated great results. I have watched developments, and while they give results which show unquestionable change in the character of the urine passed, up to the present time they have not enough reliable cases where operation had been performed for a sufficient length of time to enable us to arrive at any accurate conclusions. There is no reason to believe that this operation will become a recognized method of treating interstitial nephritis. There are a few sprigs of arteries going into the capsule of the kidney, and when we destroy these few from the branches of the renal artery; when the capsule is reproduced it is a fibrous capsule, and no blood supply can be brought direct from the fatty capsule and nothing more than temporary lessening of the pressure can result. These men claim that decapsulation supplies nutrition to the kidneys from the surrounding fatty capsule. This question has been recently considered by the pathologist at the Long Island Hospital College, and the conclusion, from experiments on animals, is simply contra-indicated, and can never become a recognized procedure.

Dr. E. S. Allen (closing): Most of the books give the amount of urea excreted at from 300 to 500 grains, and I took a small-sized man as an example. Lessened amount of urea from a healthy kidney is due either to incomplete oxidation or to sluggish hepatic action. We may have an absence of urea and an accumulation of toxic products which come in contact with the epithelial cells and interfere with their function.

As to the size of the casts, in chronic interstitial nephritis the small, narrow ones are those which are found.

LOUISVILLE SOCIETY OF PHYSICIANS AND SURGEONS.

Discussion of paper by Dr. Koontz: "Gynec-Pathology."

Dr. Blitz: I would suggest as one reason why women suffer is because of false modesty, even in those who have borne children.

Dr. Simrall Anderson: I am somewhat skeptical about the wearing of open drawers being a factor in causing infection as the doctor mentions, and to my mind the wearing of rubber gloves is by no means necessary in all cases. Repair of lacerated cervix is a preventive of carcinoma.

Dr. W. H. Coleman: I was particularly struck by the three

causes for pathological conditions, namely, the doctor, the wife and the husband. In my practice I have made it a rule to act as a teacher to the young mother, and the physician is not earning his money unless he explains to the ignorant mother how to take care of herself as well as her child. We can often save our patients before they are sick, and prevent disease by proper advice as to how to prevent pathological conditions. Have never yet attempted to teach the man, though this is a field where the doctor can do a great deal to prevent trouble, as the husband is often responsible for his wife's illness.

Dr. Sidney J. Meyers: To me the corset phase is an interesting part of the essay. The low corset so much worn gives rise to irritating conditions when breasts are pendulous. It is a curious, but nevertheless existing state of affairs, that women will allow an examination of the vagina without any great objections, but demur at permitting an inspection of the breasts. One case that I recall which emphasizes this peculiar characteristic. The woman had suffered a burn from carbolic acid, but never mentioned it until she came to term, when I found a perforating ulcer, which must have given great pain.

The subject of abortion also appeals to me, as I have had some very unpleasant experiences, and at the meeting of the State Society I suggested that a law be enacted requiring every physician to report cases of abortion coming under his knowledge, no matter what the circumstances surrounding the same, thus serving the two-fold purpose of discountenancing such procedures, and at the same time serving as a protection of honorable physicians.

Dr. Koontz (closing): I will only say that as to the point raised by Dr. Anderson, I believe that the open drawer plays an important part in infection, especially in the case of recent mother's, where the tissues are less resistant than under conditions.

Dr. Robins showed some curious roundish masses, berry-shaped and of a greenish color, which were passed by the bowel by a man who had taken a patent medicine recommended for gall stones, from which he imagined himself to be suffering.

The masses, upon examination, were found to be composed of some fatty wax substance, evidently contained in the medicine with a view to impressing the sufferer that he had passed the offending gall stones (?).

Dr. Barnett presented a piece of inferior maxillary bone, interesting from the fact that following a severe blow the bone was bent inward, and in endeavoring to straighten it the piece dropped out.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

CRETINISM—SYNONYMS: SPORADIC CRETINISM, CRETENOID IDIOCY, MYXEDERMATOUS IDIOCY WITH PACHYDERMATOUS CACHEXIA.*

BY DR. F. J. KIEFER.

This disease has an early history and description of symptoms which has been published in various parts of the country, showing that it is not confined to any special part or climate. I have seen several cases of late which impresses the opinion that the disease exists oftener than one would expect. Cretinism is a peculiar disease in children, sometimes persisting into adult life, and prevalent especially in the Alpine valleys. Differing from rickets that it is usually followed by goitre, and commonly results in idiocy more or less marked. Symptoms of cretinism appear as a rule during the first year, sometimes not until the child is older. When developed the child is usually very much dwarfed; those at the age of fourteen or fifteen years being not over two or three feet in height.

The fingers and toes are short and stumpy, the skin and tissue seems thick, and does not pit upon pressure. The head is usually large for the body, the forehead is low, and the base of the nose is broad, lips are thick and mouth half open, the hair is coarse and straight, teeth appear very late and irregular, the abdomen is unusually large and hanging, the skin is harsh and dry, and eczema seems quite

* Read before the Louisville Medical and Surgical Society, June 20, 1904.

common, the voice is harsh, and the children do not walk until the fifth or sixth year. The mental condition being impaired, always very dull and can not remember anything for any length of time; they are usually very good natured, make up with almost anybody; they are very bold and daring, seem to have no fear of approaching danger. Congenital cretinism is rare. In the majority of cases the disease begins to show itself in the second year, which arrests bodily development and produces symptoms which have already been mentioned, the face being expressionless.

It has been explored beyond a doubt that this condition depends either upon a congenital absence of the thyroid gland or some interference that abolishes its natural function. It has been demonstrated at autopsies in selected cases that there was no trace of the gland to be found; the removal of the gland the symptoms follow that of myxedema of an adult. Heredity plays some part, and the acute infectious disease attribute predisposing element, which has the tendency of destroying its function by seat of inflammation and atrophy.

Cretinism is a disease of degrees, and when the changes mentioned are less marked the condition is referred to as semi-cretinism or a cretenoid state. The offspring of two goitrous parents is invariably a cretin, who may or may not be goitrous, but is myxedemateous. A non-goitrous cretin has goitrous antecedents, and which extinguished from sporadic cretinism, the condition being congenital. In goitrous cretin the disease of the thyroid may commence at any period of life. The following is a brief synopsis of one of my cases I have under my observation only a short time:

J. F. H., Jefferson county, white male, age seven years, height thirty-eight inches, weight forty-five pounds. Parents—mother living, has been and is now in good health; shows signs of great worry and hard labor. Father died September 10, 1898; cause, la grippe. A great sufferer from rheumatism, dyspepsia and a subject to alcoholism.

The patient was born December 31, 1896. Labor progressed normally; he was a small and poorly nourished child. Mother nursed him till he was two and one-half years old, and walked at the age of three; greatly delayed dentition, and has been very restless and of a roaming disposition. Teeth are very irregular, soft and brittle; hair straight, hard and coarse: eyes blue and clear. Breathing through the nose obstructed. Lower jaw dropped, mouth open and tongue protruding, skin very rough and dry, extremities cold, drawn and wrinkled, especially about the hands and fingers, feet and toes, a very

prominent thickening of and about the muscles of the shoulders and hips, of a soft and flabby condition, which do not pit upon pressure, not well nourished, although the appetite is usually good. Abdomen large and distended, has a very long prepuce, not adherent. The testicles have not descended into the scrotum. He can only speak a few words, intellect being very poor. Daily habits are regular.

Treatment commenced with one-third grain thyroid extract every three hours, and gradually increased the thyroid every week. Diet being milk with lime water, alternated with panopeptone every two hours. Every ten days I gave him calomel with lactopeptine, after which was followed with syrup iodide of iron. I am getting good results, in so far as he is becoming more settled, and seems to be taking more interest in the surroundings and more obedient.

REPORT OF CASE OF "SPLENIC LEUKEMIA" TREATED BY X-RAYS.*

BY J. T. DUNN, M.D.

As splenic leukemia is such a fatal disease, I take it that any means which will cure this dreaded disease will be of much interest to this society.

The following case, briefly reported, presented itself at my office for treatment December 17, 1903, if happily the X-ray treatment would increase her chances of regaining her health.

She gave the following history: Mrs. G., age twenty-six; has a child sixteen months old; previous health good. Soon after the birth of her child there appeared a tumor in the left side beneath the ribs, which continued to grow. Her health began to fail, and in spite of the most approved treatment she continued to grow worse. Patient was removed to infirmary, consultation called, and operation considered. A blood count was ordered and a diagnosis of leukemia made, whereupon she was removed to her home without the operation. Not daunted by the grave prognosis, she engaged a "magnetic healer," but with no satisfactory results.

It was at this time that she came to me for X-ray treatment. I could promise her nothing definite as I could find no report of a similar case having been cured with the X-rays.

* Read before Jefferson County Medical Society.

The condition when I first saw the case was as follows: Weight 110 pounds, very thin face and limbs, muddy complexion, great debility, abdomen very large, resembling abdomen at full term; heavy, offensive sweats and amenorrhea; urine negative.

Examination showed a dense mass filling a little more than half of the abdomen, extending downward to within two inches of the pubic bone, and one and one-half inches to right of median line reaching up to diaphragm, was slightly movable, not painful, but very hard; the intestines were displaced to the right. With previous history it was very evident that this was the spleen occupying so much of the cavity.



Cut shows size of Spleen when treatment was begun and five months later.

Treatment began December 17, 1903. Internally, no medication was given but Glyco Phospho Calasaya (Newman's); X-ray treatments were given almost daily, taking seventy-five treatments in ninety-one days, each consisting of an exposure over the spleen to a hard tube at eight inches distance for ten minutes.

After two weeks the appetite began to increase and the sweats to abate. When thirty-six treatments had been given the appetite was splendid, the sweats gone, and the spleen very much decreased in size and quite soft. When seventy-five treatments had been given, covering a period of ninety-one days, it was with difficulty that it could be detected; the skin had regained its rosy color, and the lips, previously very pale, were rosy. As treatment progressed, strength and spirit took possession of the patient, and at the end of the first month she was able to walk where she pleased, and was very cheerful. She had gained 9½ pounds in weight, the spleen had lost at least ten pounds,

so that there was an actual increase of about twenty pounds. She now weighed 119½ pounds.

After seventy-five treatments had been given she was dismissed for three weeks, during which time the monthly period presented itself and ran a normal course. She also had the measles, and came through the attack just as if she had never been the victim of the hitherto almost invariably fatal leukemia.

Under date of June 10, 1904, I have the following report on blood condition by Dr. John E. Hays, which is interesting to compare with his report dated October 6, 1903, about eight and one-half months ago.

October 6, 1903: Red, 4,600,000; leucocytes, 128,000; color index, .65; proportion red to leucocytes, 35:1. Red cells: Shape, irregular; size, irregular; nucleated, none. Leucocytes: Large lymphocytes, 8½%; small, 5½%; poly-morpho-nuclear, 39%; eosinophile, 7½%; myelocytes, 38%. Remarks: Myelocytes, very numerous. Hemaglobin, 60 per cent.

June 10, 1904: Red, 5,544,000; leucocytes, 37,000; color index, .65; proportion red to leucocytes, 149:1. Red cells: Shape, irregular; size, irregular; nucleated, none. Leucocytes: Large lymphocytes, 5%; small, 10%; poly-morpho-nuclear, 65%; eosinophile 5%; myelocytes, 15%. Remarks: Myelocytes not as numerous as in former analysis. Hemaglobin, 65 per cent.

She is still under treatment, and up to date has taken 129 treatments. The spleen continues to decrease in size. The menstrual function is normal, and the patient is anxious to be dismissed, as she feels perfectly well.

I shall endeavor, however, to continue treatment until the normal ratio exists between red and white cells.

Selections.

KERATO-CONUS.

BY G. GRIFFIN LEWIS, M.D.

Ophthalmic Surgeon to the Hospital of the Good Shepherd; Ophthalmic and Aural Surgeon to St. Mary's Maternity Hospital; Ophthalmic and Aural Surgeon to St. Vincent's Asylum; Member of the Syracuse Academy of Medicine; the Central New York Medical Society; the Onondago County Medical Society, Etc.

Kerato-conus is a peculiar pathological condition of the cornea in which it gradually becomes more or less conical in shape without any accompanying inflammation, pain, loss of transparency or other ocular symptoms except a gradual failure of vision.

It is much more prevalent among females, and, when not congenital, usually begins between the tenth and fourteenth years of life, though often earlier, and proceeding very slowly reaches its climax within from five to seven years. In any degree it may become stationary, permanently and only for awhile, and then undergo rapid increase. In some cases it may attain remarkable proportions. Dr. H. D. Noyes reported a case a few years ago which measured three-fourths of an inch in length.

As a rule both eyes are affected, but one usually in advance of the other. When monocular it is usually very slight. The cone almost invariably points below the center of the cornea, which fact is probably due to the pressure of the upper lid, and it never advances to bursting by extreme stretching, ulceration or sloughing.

Cases of kerato-conus are comparatively rare, so much so that many cases are not likely to come under the care of one surgeon, and it is usually well advanced when the unfortunates seek professional aid. According to the statistics of six of the largest ophthalmic hospitals in the United States there is only on an average, one case of kerato-conus to every 7,206 eye cases.

Literature on the subject is also very meager. The Index-Medicus during the eight years from 1891 to and including 1899, only gives a total of six original articles, six reports of cases written on this subject throughout the world. The older works on ophthalmology treat more

exhaustively of it than do the more recent ones. Bowman, Critchett and Knapp, perhaps, have been the three most generous contributors of literature on the subject.

The causes of kerato-conus may be classified into two groups, constitutional and local, the latter being dependent on the former. Heredity seems to figure somewhat in the etiology of this disease, as Bowman and others have reported several cases in the same family. Malnutrition and feeble muscular conditions brought about by severe or protracted illness, over rapid growth, phthisis, feeble circulation, scrofula, anemia, chronic dyspepsia and menstrual disturbances have been observed to be associated with the development of conical cornea. The fact that it is more prevalent in females, and that the period of puberty is the usual time for its incipency, points very strongly to menstrual disturbances as one of the leading factors in its causation. Typhoid fever, before or at the age of puberty, may bring about this condition. Derby says: "That considerable general change may take place in the system at large as the result of typhoid fever was first brought to my notice years ago by the study of a case where an emmetropic patient went to bed with an attack of typhoid fever, remained six weeks, and arose with a marked and persistent change of myopia." The immediate local cause is the disturbance of the relation of the intra-ocular pressure to the resistance of the cornea, which may be due to one or more of the following conditions:

1. Malnutrition, atrophy and diminished resistance power of the center of the cornea which is farthest from the blood supply.
2. Incomplete development of the center of the cornea which during fetal life is the last part to be formed.
3. Muscular tension of the external ocular muscles, which in some cases have been known to exist before the conical condition of the cornea developed.
4. Eye strain with the associated intra-ocular congestion and relative increase of tension. If the ciliary muscle plays an important part on the tension and alternations of the corneal curvature and if astigmatism may, in some instances, be the direct result of such action, and that, too, upon the healthy cornea, why should not a severe and long continued spasm of accommodation eventually produce a conical condition of a weakened, undeveloped or badly nourished cornea?

We know nothing definite of the pathology of this malformation of the cornea, but there is no doubt that the bulging is preceded by an atrophy of the central part of that membrane, which is farthest from

its source of nutrition. Whether this atrophy of the membrane is caused by defect or deformity from birth and yields to internal pressure in youth is still an unanswered question.

Dr. His found by experimenting upon guinea pigs when he scraped the epithelium of the cornea off, that membranes became cloudy and protruded, and that although the cloudiness cleared up after awhile the protrusion remained.

Dr. J. A. Spalding says: "In the absence of pathological alterations subsequent to keratitis I should be inclined to attribute the cause to softening of the corneal tissues from dyscrasia similar to that which gives us white swelling of the knee; the so-called scrofulous—for lack of a better word."

Ranpoldi concludes from a microscopic examination of an eye affected with kerata-conus that the changes in curvature must be sought in alteration of Descemet's membrane and its epithelium, which changes are dependent upon constitutional conditions. Bowman states that the changes are confined to the laminated tissues of the cornea, as in the specimens which he examined microscopically the posterior laminated and the epithelium both on the front and on the back of the cone were unchanged.

When the disease is far advanced the increased friction and the exposure of the apex sets up an interstitial keratitis, but bursting never takes place. This is no doubt due, as Bowman says, to the exosmosis of the aqueous through the thin cornea, thus reducing the inter-ocular pressure, so that it is no longer in excess to the diminished corneal resistance. In its earliest stages there are only subjective manifestations, such as diminished acuity of vision and symptoms of asthenopia, and unless we examine very closely we will overlook the true condition. Subsequently, however, the bulging will be sufficiently advanced as to give a peculiar brilliancy to the eye like a drop of molten glass deposited upon the corneal center, and the pupil is apt to be large, and sometimes the iris is tremulous.

The ophthalmoscopic picture of the fundus will make the vessels appear broken and twisted. In the more advanced stages the cone may be easily seen through the closed lids as the ball is moved in different directions. The ciliary vessels may become somewhat congested and the apex may grow more or less cloudy.

The accurate estimation of the refraction in these cases is very difficult on account of the distorted and wave like sides of the cone. Vision can never be brought up to normal, and in the pronounced cases

glasses are of little or no use. Those cases in which vision is improved by the use of eserine or by the pin-hole disc are usually benefited by glasses. It is generally assumed that the general refraction in kerato-conus is myopic. This may be so in the majority of cases, but fully one-third have hyperopic astigmatism, at least in one meridian. In handling these cases we should not be governed by the precise rules which usually aid us in the correction of refractive errors and place too much reliance upon subjective methods, but should rely upon objective measurements. As Mackay says: "The problem before us is to estimate the actual state of the refraction through a small area of the cornea situated as near the visual axis as possible." With this object in view it is best to examine the eye first with a dilated pupil, then with a contracted pupil. The direct ophthalmoscopic method is of no assistance. Retinoscopy however, is valuable, and upon it we can depend more than on any other method. A peculiar shadow on the side of the cone opposite the light, which circles around the cone as the mirror is moved from side to side, is characteristic of kerato-conus. This shadow may confuse us somewhat in our efforts to ascertain the refractive condition, but by using a disc with an aperture of from 3 to 5 mm. in diameter, thus screening from view every part of the cornea except the limited area which we wish to correct, the process is very much simplified.

The ophthalmometer and Placido's disc are also great helps in selecting the clearest part of the cornea. Often convex cylinders are accepted. In some cases convex cylinders placed at right angles to concave cylinders will give better vision than sphero-cylinders. In those cases which remain stationary stenopaic appliances sometimes render effectual assistance, but are not satisfactory for constant wear, as they shut off too much light and contract the visual field. This objection may be partially overcome by having a disc pierced with a series of small holes like the cover of a pepper box. Snellen constructed a pair with a stenopaic slit running from left to right, and ending in the middle with a sharp point, thus enabling the patient to read when the point in the slit is brought just in the visual line. Helfrich reports a case of a young boy who devised a lens consisting of a plain glass with a horizontal black strip across the center, the width of which was sufficient to shut off those rays of light which would naturally infringe on the conical part of the cornea. With this glass his vision was improved from $\frac{1}{200}$ to $\frac{3}{20}$. All these appliances, however, are very much objected to on account of their unsightliness.

Raehlmann was the first to recommend the hyperbolic lens which in most cases improves vision remarkably as long as the visual axis corresponds to the apex of the lens, but as soon as the patient turns his eye the least to one side the condition is worse than before. For this reason they are more suitable for close work than for street wear. The same objection pertains to the conical lenses recommended by Angelucci. The contact lens suggested by Hershell, which fits on the front of the eyeball somewhat like an artificial eye, also improves the eye very much, but irritates the eye, and is not long tolerated. The treatment of conical cornea is, as a rule, of a very unsatisfactory character, and relief is only relative. Some cases have been arrested in the early stages by a general alterative treatment, absolute rest, avoidance of violent physical exertion, open air, good food, hygienic surroundings, digital massage, correction of refractive errors, compress bandages, mydriatics, myotics and astringents. Culver reports good results from the use of thyroid gland. Surgical intervention is to be advised only after other methods have failed and the patient is reduced to a state of helplessness, for the surgical treatment of conical cornea, besides being a tedious undertaking and beset with dangers, has certain cosmetic drawbacks and doubtful gain. Sir William Bowman was the first one to attempt to correct the optical defects of conical cornea by an operation. Having noticed the improvement in vision afforded by the stenopaic slit, he endeavored to supply the latter permanently by performing the operation called iridodesis, or changing the pupil into a vertical slit by drawing the papillary margin into the corneal wound and leaving it there. This operation improved vision considerably in some cases but it occasionally provoked cyclitis and sympathetic trouble. Von Graefe had good results in some cases by shaving off the apex of the cone without entering the anterior chamber, and then applying a stick of mitigated silver caustic to the cut surface, thus producing an ulcer and eventually getting cicatricial contraction. This method was very painful, and not infrequently set up a cyclitis. Bowen next invented a small trephine by which he removed a disc from the summit of the cornea. De Wecker also adopted this method, and for years this was the favorite plan of treatment. Critchett then conceived the idea of removing a small elliptical piece of cornea at the apex, allowing the wound to heal without sutures. This method is also still practiced by many ophthalmic surgeons.

Dr. J. W. Buller described a case in 1897, in which he got an excellent result by passing a Graefe blade vertically through the apex

and bandaging, then one week later passing the blade horizontally through the apex, removing a small piece of the cornea with a pair of iris scissors and bandaging again.

Repeated evacuations of the aqueous humor have been employed more or less for many years, but without any pronounced result.

The method most generally adopted of late years, and the one which is the least painful in its application and the least liable to subsequent complications, is cauterization of the apex with the actual or galvano-cautery. This may be applied in various ways. Abadie burns a deep furrow at the upper edge of the cornea. Callan cauterizes at opposite points to the greatest curvature going down into the *membrana-propria* of the cornea and repeats the procedure if necessary. Noyes recommended cauterization of the cone without perforation. Weeks uses the same method. The great majority of operators, however, seem to favor Knapp's method of first cauterizing the apex with an oval electrode and then piercing the eschar with a fine pointed electrode. This method is performed as follows: After dilating the pupil with atropine and cocainizing the eye an assistant gently raises the upper lid, as no speculum should be used or pressure exerted upon the eyeball. The oval electrode is placed cold over the apex and withdrawn as soon as it has been brought to a red heat. Then with a needle electrode, the size of which depends upon the amount of contraction desired, the center of the apex is pierced and the needle quickly withdrawn, so as not to heat the aqueous too much and produce a traumatic cataract. For the same reason the electrodes are not allowed to reach a white heat, but are withdrawn as soon as they are brought to a red heat. This method is easily performed, does not result in anterior synechia, allows rest and contraction of the cornea by the slow and continuous drainage of the anterior chamber, and leaves a small scar. A moderately tight bandage is kept on most of the time following this operation, and the increased tension which is liable to follow may be combated with eserine. A few cases of cataract, cyclitis, or even panophthalmitis have been reported to have followed this method, but thus far it has been productive of more good results and fewer bad ones than any other, and may be now considered the classic treatment. In cases where a somewhat extensive eschar has been unavoidable, it may subsequently be necessary to make a small artificial pupil in the line of vision, preferably inward and slightly downward.

Vision and appearance will also be somewhat improved by tattooing the corneal opacity with India ink, providing that membrane is not too thin to admit of it.

Progress of Medical and Surgical Science.

Surgical Treatment of Chronic Empyema of the Antrum of Highmore.—By C. E. Bean, M.D., St. Paul, Minn. Bean reviews the different surgical procedures for the relief of chronic empyema of the maxillary sinus, beginning with the first operative procedure done in 1675 by Malinette, who made a crucial incision in the cheek, and then drilled into the cavity through the canine fossa. The author offers as the chief objection to the method of Cooper of extraction of a tooth and attacking the sinus through the alveolus the length of time necessary to effect a cure, it requiring from six months to three years.

In the last five or six years the operation known as the Caldwell-Luc method has become very popular, and has been followed by uniformly good results. The technique, as described by De Roaldes, is as follows :

An incision is made through the soft parts beginning at the gingivolabial fold near the frenum anteriorly and extending in a horizontal direction back to the root of the first molar tooth. The periosteum is included in the incision and both flaps are detached from the bone, leaving the anterior bony wall bare. With a dental burr or a chisel an opening is made into the antrum at the deepest point of the canine fossa—this opening is made large enough to permit the finger being readily introduced. The anterior third of the inferior turbinated bone of the affected side is then removed with a cutting forceps. (In an article by Dr. Luc, read at the meeting of the American Laryngological Association, in 1903, he has modified his first operation by removing the greatest part of both middle and inferior turbinated bones, thereby facilitating the operation and getting better results.) After the hemorrhage, which at times is very profuse, has ceased, the finger is introduced into the nose, and placed upon that part of the antral wall corresponding to the resected turbinate. With this as a guide a chisel is placed upon the corresponding point on the side of the cavity and used to break away a portion of the bony wall, the opening by means of cutting forceps being made large enough to permit of the introduction of the finger. The cavity is thoroughly curetted, removing

entirely the diseased lining membrane and cleaned, and after the hemorrhage has been controlled the wound in the canine fossa is sutured with fine catgut, so as to cut off all communication with the mouth. (This by some operators has been considered unnecessary, as the wound if left alone closes readily.)

This leaves a large opening from the most dependent portion of the antrum into the nose, through which the parts freely drain and are easily cleaned.—*St. Paul Medical Journal.*

Lithomy Versus Litholapaxy. In a recent communication to the Ontario Medical Association, Dr. Chas. B. Shuttleworth, M.D., C.M., L.R.C.P., F.R.C.S., discusses the advantages and disadvantages of lithotomy and litholapaxy. After a brief review of the history of these operations, he states that no single operation meets the requirements in every case of stone. On the other hand, that we have several different methods, each of which presents certain advantages peculiar to itself, each one having as well dangers and difficulties which we must recognize and avoid. Therefore, the best results will be attained by him who possesses a thorough, practical knowledge of all methods, and by study of the individual case in the interest of his patient, and be in a position to select that special operation which best meets the indications and requirements. His results will be better than he who sticks to one operation, however expert he may be in its performance.

In making a choice of the different methods of operating it will be necessary to consider the following factors :

1. Age and mortality.
2. Size and consistency of the stone.
3. Completeness of cure.
4. The state of the urethra, bladder and kidneys.
5. The damage done to anatomical structures and interference with the functions of the parts.

To these must be added the skill and experience of the operator.

Age and Mortality.—It is notable that the mortality of operations for stone is least in children, and increases with each decade after puberty. He conveniently arranges them in three groups, according to age: (*a*) Infancy to puberty; (*b*) Puberty to middle age; (*c*) middle age to old age. This division marks with more or less accuracy certain epochs in the development and decay of the genito-urinary

organ. He quotes the following table compiled from various sources by Cabot :

GROUP (a)—INFANCY TO PUBERTY.

	Cases.	Deaths.	Percentage Mortality.
Perineal Lithotomy.....	602	19	3.1
Suprapubic	637	84	13.1
Litholapaxy.....	284	5	1.7

GROUP (b)—PUBERTY TO MIDDLE AGE.

	Cases.	Deaths.	Percentage Mortality.
Perineal lithotomy	226	22	9.7
Suprapubic lithotomy.....	159	18	11.3
Litholapaxy.....	485	22	4.5

GROUP (c)—MIDDLE AGE TO OLD AGE.

	Cases.	Deaths.	Percentage Mortality.
Perineal Lithotomy	69	13	19
Suprapubic lithotomy.....	91	17	18
Litholapaxy	581	40	7

Operation.	Cases.	Cured.	Died.	Mortality.
Lateral lithotomy.....	7,201	6,407	794	11.02
Suprapubic lithotomy ...	147	86	61	42.17
Litholapaxy.....	10,073	9,665	399	3.96

These figures show that in childhood the crushing operation is one of comparative safety, although there is little to choose between it and the time-honored lateral section. The *sectio alto* is at this age much more dangerous. After puberty the enlargement of the urethra and development of the prostate, with a constant increase in vascularity, increases the dangers of cutting through the perineum. These changes, however, facilitate the crushing operation, and render the performance of litholapaxy comparatively easy and safe. In old age the mortality is decidedly in favor of litholapaxy, being very little higher than it was earlier in life, whereas the danger of all cutting operations is markedly increased at this age. This is due to a loss of vigor, the increased size of the prostate gland, with its injurious effect on the bladder.

The size and consistency of the stone have been and are being extended under litholapaxy. The hardness of the stone also does not contraindicate litholapaxy only in exceptional cases; then the surgeon will have to resort to a cutting operation. One of the greatest objections to litholapaxy is the danger of leaving a fragment of stone in the bladder; but this, he says, is due rather to a want of thoroughness on the part of the surgeon than to the operation itself. Now that we have better instruments at hand for evacuation. The danger of retention of fragments, however, is greatly increased by obstruction,

such as enlarged prostate. The bladder is thus apt to be sacculated, and retention, therefore, encouraged, while a healthy bladder, on the other hand, would rid itself of such debris. Stricture of the urethra is no longer regarded as an obstacle to crushing. It may be first dealt with either by divulsion or internal urethrotomy, except in old, indurated, tortuous stricture, complicated with fistula, or an intolerant urethra, followed by rigors and fever. It would be better to cut, which would permit the removal of the stone and cure the stricture. Again, enlarged prostate is no bar to litholapaxy where necessary instruments can be introduced. The difficulty here lies in the fact that it is hard to seize the calculus and to the factor of leaving fragments behind. In such cases he advises the suprapubic systotomy in the hands of the general surgeon. In old men with enlarged prostate, where mechanical disturbance from litholapaxy stirs up a cystitis intense and prolonged, he cites the opinion of Keyes, that these cases do well under lithotomy, and in them the choice of operation lies in favor of the suprapubic method, as it allows the surgeon to deal at a single sitting with the stone, the minor necessity, but also with the more important and permanent disability, the enlarged prostate, and by converting the suprapubic lithotomy into a prostatectomy, making the patient's necessity the surgeon's opportunity. Where the stone is encysted or lodged in the opening of the ureter or urethra and a concomitant tumor of the bladder exists, suprapubic lithotomy is the operation of election. In diseased condition of the bladder or kidneys contraindicated cutting operation, he suggests following the advice of Sir William Hingston that the lithotrite is as safe an instrument as the lithotomist knife, nor would it be wise to delay removing the calculus in order to improve these conditions.

The Damage Done to Anatomical Structures and Interference with the Functions of the Part.—The especial superiority of litholapaxy to all other methods lies in the fact that, when carefully performed, it involves no permanent injury to the parts, nor does it disturb any physiological function. Its sequelæ are few and rarely serious. Suprapubic lithotomy causes no permanent trouble, although a fistulous opening sometimes remains which refuses to heal, and is a constant source of discomfort to the patient. Hemorrhage and urinary infiltration, with consequent sepsis, constitute the chief dangers of the operation. The presence of a wound in the bladder wall may be the cause of adhesions to the abdominal wall or tubes, and so interfere with the proper contraction of the fibers of the bladder, or a urinary

deposit may take place on the scar and lead to a recurrence of stone.

The lateral operation passes through important structures. Incontinence of urine, fistula, injury to the seminal ducts, sometimes resulting sterility, are objections urged against the operation. It often involves an extensive incision into the prostate, or serious bruising of the gland, by the necessary dilatation of the neck of the bladder, and the extraction of the calculus through it—a grave danger in old people. Profuse hemorrhage and injury to the rectum must also be taken into account.

He refers most favorably to perineal lithotrity, proposed by Dolbeau, as modified by original Harrison, which he regards most favorably. (1) Because it enables the operator to crush and evacuate large stones in a short time. (2) Less risk to life than other cutting operations, and is well adapted to the old and feeble, where for any reason crushing is inadmissible. (3) It permits of more effectual washing of the bladder and any pouches connected with it, as the route is shorter and larger tubes may be used. (4) The bladder may be thoroughly explored by forceps or finger to ascertain that the viscus is cleared of debris. (5) It allows of efficient drainage of the bladder by rubber tubes, and treatment of cystitis due to retention of urine in pouches in its walls.

In cases of deep stricture of the urethra a cure would result if it acted as a complication (obstruction). He therefore concludes that perineal lithotrity has a great future on account of its safety. Forbes Keith, of Delhi, India, reports 150 operations by this method, with a mortality of 1.9 per cent. (*Lancet*, September 30, 1893.)

In conclusion the choice of operation may be briefly summarized as follows :

1. Litholapaxy is certainly the operation of election in all simple cases of stone in the urinary bladder.

2. When the stone is too hard or too large to be crushed through the urethra or removed by the lateral method without injury, the suprapubic method should be adopted, or, perhaps, better, by perineal lithotrity.

3. When the stone is encysted or associated with a tumor of the bladder or prostate, chose the suprapubic route and remove both at the same time.

4. Where there is a tight, deep urethral stricture, especially when fistulæ exist, requiring a long operation to overcome, select the suprapubic or median perineal operation.

5. In ankylosis of one or both hip joints, which interferes with the use of urethral instruments and excludes all perineal operations, do suprapubic lithotomy.

6. In the presence of foreign bodies in the bladder, which may form the nucleus of a calculus and resist the lithotrite, perform one of the perineal methods.

7. Although litholapaxy applied to children is very successful in the hands of experts, for the present lateral lithotomy is the safer operation for the general surgeon.

8. Litholapaxy should be carried out, whenever possible, when senile degenerations exist, or when there are morbid changes in the genito-urinary apparatus, and the necessary treatment afforded to the complication, either before or after litholapaxy.—*The Canadian Practitioner and Review*, July, 1904.

How the General Practitioner Should Treat Gonorrhea.—The following is an abstract from an article read by Dr. Fred. C. Valentine:

1. Every general practitioner is practically competent to treat successfully uncomplicated gonorrhea, if he will devote as much attention to this as he does to any one other disease.

2. Every patient with gonorrhea is entitled to the services of his family physician just as much as if he had acquired any other disease in consequence of drunkenness or other violation of ethics or morals.

3. The general practitioner who declines to treat uncomplicated acute anterior gonorrhea avoids one of the most sacred duties to the profession and to humanity.

4. The patient who, because he has gonorrhea, is refused the services of his own physician, is likely to become an opponent to scientific medicine, to the detriment of his own health, that of his family and of the community.

5. The scientific treatment of at least acute anterior uncomplicated gonorrhea is perfectly within the power of the general practitioner.

6. The irrigation treatment of gonorrhea is, as yet, the most effective method, and that most in accord with the modern scientific understanding of the disease.—*New York Medical Journal*, July, 1904.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

HEALTH OF ATHLETES.

In a recent weekly journal it was reported that oarsmen, especially on college crews, were in a large percentage healthy men and remained so long after their training days were over. There is some diversity of opinion as to whether athletics are doing people any good physically, and as to men it has been known that thousands have a mania for hard training, when it is the worst thing they ever did. As long as a heart will back up the work given the muscles in training and hypertrophy just enough to keep up arterial tension, a man is justified in taking exercise, and a physician or some well trained physical director should monthly or regularly examine the person in question. Nations who are small, wiry and active are usually freer from weak hearts than a nation of large build and much weight.

Tobacco and exercise produce the same conditions in people, but

called by the respective names of "athletic heart," and "tobacco heart." Oarsmen are usually the healthiest athletes, for they have a rhythmic exercise and fresh air is always in quantity, and so few men are harmed, for the reason that alcohol and tobacco, coffee and tea are abstained from, and the diet is cut down to that which is absolutely necessary, as meat once a day, say at dinner, few vegetables, a good crusty bread, milk or buttermilk : at breakfast a cereal food and plenty of water. All excitement is avoided, and rest in bed sought early in the evening. An oarsman usually likes aquatics, and hence he takes a moderate amount of exercise daily for some weeks after a "big" race. This explains the fact that his heart is keeping to its tone of work and let down easy ; whereas a man who trains in a gymnasium, (in doors) probably at night, for months to do a pole-vault or German horse work, or shot put, or worse, a rope climb, the next day after the contest heaves a sigh, quits his training suddenly and abstains for months. This man, when he renews his exercise, will find himself so short-winded that the least exercise will fatigue him like a ten-mile cross country run. I have seen the best athlete I ever knew, who was a splendid oarsman, sustain a slight rupture to regurgitancy of the mitral valve in a boat race. It has never hurt his ability in the least, for he holds a chinning record of thirty-eight times, a rope climb record, and can chin himself with either arm singly.

It seems, then, that in athletics, in any exercise some should never plunge deeply into physical training. When the heart will not back up your development, gradually stop, or be satisfied with slow swimming, walking or horseback riding. Fresh air, and plenty of it, is most essential, for lots of hypertrophied hearts would not be were the blood areated well. Some people will never be harmed by any exercise to any extent, or any diet and little rest. Diet, rest, habits, and, very strongly, interest in some sport beyond the feature of "big muscles," are all to be considered. Some people can be perfectly healthy and never exercise more than walking, and live long. Education to athletics from the shoulder of scientists is sadly wanted instead of from fanatic athletic cranks and zealous physical directors, and men must be made to understand that some few men will develop large muscles with the least exercise, and those who, after years of training, get hard, larger muscles, usually get a weak heart with it. It would be better if pipe smoking would be considered "common" instead of a fad to college men, for they invariably dabble in some athletics, and the two are a combination a heart is surely up against.

EDITORIAL NOTES.

We take pleasure in announcing that Dr. Adolph O. Pfingst, who has for nine years been Professor of Physiology and Histology in the Louisville Medical College, and now resigned that chair, has accepted the Chair of Ophthalmology, Otology and Rhinology in the Medical Department of Kentucky University, holding title of professor of those branches. We heartily congratulate the Kentucky University in the acquisition of such a worthy and able man. He has already entered into the duties of his new position, as the summer session is now going on. Dr. Pfingst is one of the corps of collaborators for *THE AMERICAN PRACTITIONER AND NEWS*.

In this issue of *THE AMERICAN PRACTITIONER AND NEWS* are to be found the questions asked of the applicants for certificates for practice at the examinations held in Indianapolis by the State Board of Indiana at its recent meeting. We are informed by one of the applicants that the bar upon which most of them stranded was upon bacteriology and chemistry. (A glance at these questions does not show them to be difficult or in any way catch questions. Difficulty comes from one of two things—lack of teaching or failure on part of the student to learn them.—ED.)

STATUE TO DR. WILLIAM ELIAS B. DAVIS.

The memory of Dr. William E. B. Davis, late of Birmingham Ala., will be appropriately perpetuated by the erection of a monument by the Southern Surgical Gynecological Association, of which Dr. Davis was the originator as well as founder. He not only conceived the idea, but organized the association in all its details, and served as its secretary and executive officer for thirteen years. The association does well in thus testifying its appreciation of this distinguished physician, whose memory will live in spite of granite or bronze.—*Buffalo Medical Journal*.

The statue will be made by G. Moretti, who was the designer of Vulcan (the Colossus iron man which represents the Birmingham district at the St. Louis Exposition), and will be in bronze, seven and one-half feet high, standing upon a granite pedestal nine and one-half feet high.

Signor Moretti is now making a marble bust of Dr. Davis in Alabama marble. The plaster caste is a very fine likeness. He has made an indemnity contract to have the statue ready by the first of December next, that it may be unveiled at the coming meeting of the Southern Surgical and Gynecological Association.—*From the Alabama Medical Journal*, May, 1904.

Book Reviews.

Manual of Materia Medica and Pharmacy. Specially designed for the Use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students, by E. Stanton Muir, Ph.G., V.M.D. Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third edition, revised and enlarged. Crown octavo, 192 pages. Interleaved throughout. Bound in extra cloth, \$2.00, net. Philadelphia: E. A. Davis Company, Publishers, 1914-16 Cherry street.

We have in the above a conveniently arranged Manual of Materia Medica and Pharmacy. The book is interleaved for notes; we are glad to see in a manual of this class that the individual drug members listed alphabetically, and in the chapter on pharmacy a representative preparation is given in detail as to its mode and manner of compounding, and the rest of that group are mentioned therewith. The botanical feature has not been omitted, and the most common synonyms are given. The pharmaceutical processes are given, then the official preparations; systems of weights and incompatibility both figure.

It is the desire of the reviewer to see more books like this used by the first-year student of medicine, and after he be well grounded in pharmacy and materia medica, given a rigid didactic and laboratory course in pharmacology, and he need not have to study therapeutics: he would then know how to prescribe.

Practical Medical Series of Year Books, comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Issued Monthly Under General Editorial Charge of Gustavus P. Head, M.D., Chicago Post-Graduate Medical School. Vol. VI.: General Medicine. Edited by Frank Billings, M.S., M.D., and J. H. Salisbury, M.D. May, 1904. Price, \$1.00. Price of whole series, \$5.50. Chicago: The Year Book Publishers, 40 Dearborn street.

The above volume is especially rich in recent topics, and does not appear to have had anything omitted. Stomach diseases, malaria, typhoid and paratyphoid, and in fact troubles of the whole digestive tube and its accessories are very thoroughly expatiated upon. The reading is wholesome and newsy, and the volume seems up-to-date. The type is clear, binding good and index ample. We recommend the series, but the above book only needs to be seen to be appreciated.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes.
by Richard C. Cabot, M.D. With Colored Plates and Engravings.
Fifth Revised Edition. New York: Wm. Wood & Co., 1904.

The above book contains about (90) ninety pages of new matter and about twenty (20) pages have been stricken out. The inception of methyl alcohol as a hardener for blood films has simplified the technic of staining of blood, and the new stains of Romanowsky and the Jenner, Leishman and Wright modifications have demanded a new edition, and Doctor Cabot was awake to that fact, and supplied the want. The book contains a new set of colored plates stained in this manner and are excellent. We are pleased to note Dr. Cabot's review of blood literature and text-books, and admire his frankness of expression in this. "Cabot's Guide" has been a standard, and remains among the best. The changes described but add to its already usefulness, and the general reading has been added to and changed where the author saw fit. No unwise selection is possible in the procuring of this volume.

Obesity. A Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Dr. Carl von Noorden, Senior Physician to the City Hospital in Frankfort, a. M. Price, 50 cents. New York: E. B. Treat & Co., 1903.

This little book of fifty-nine pages represents the views of Prof. Dr. Carl von Noorden on obesity, after an exhaustive study and several years' experience from experiments and also bedside observation. The book consists of an introduction of eight pages, then Part I., simple obesity is treated upon in subjects otherwise healthy, and Part II. as complications with other diseases, as of the kidneys, rheumatism, gout, diabetes, etc. The author has made quite an interesting little work on a subject we need enlightenment upon, and the translator has put the same to splendid English. It is very neatly bound, and the type clear, as in all this series on metabolism.

Society Proceedings.

LOUISVILLE MEDICAL AND SURGICAL SOCIETY.

DISCUSSION OF PAPER.

Dr. Kennedy—Mr. President: The doctor's paper was very interesting. Of the subject I know very little, because we see few cases of this kind. I only wish the doctor had been able to bring in the patient to let us take a look at him.

Dr. Speidel—Mr. President: I would like to say that I had the opportunity ten years ago to see the thyroid treatment when first used for this condition. While in New York I saw two cretins. One symptom that they all present is the thick tongue protruding from the lips. This is characteristic of these cretins. These cases showed a marked improvement on the thyroid treatment. I noticed a discussion in the New York Academy of Medicine, reported in one of the journals, that the cretin improves on the treatment, but the moment it is discontinued this condition returns.

Dr. Hayes—Mr. President: I have never seen a case of cretinism. Dr. Kiefer's paper is very interesting, and the result of his treatment is gratifying. The thyroid treatment in a great number of cases has proved that the gland was absent. It is the only treatment that offers any hope of relief.

Dr. Jenkins—Mr. President: A peculiar feature of these conditions is the embryology of the thyroid gland. We learn from it that the thyroid gland is an offshoot from the pharyngeal end of the gut tract. In early fetal life connection remains between this body and the pharyngeal pouch. This continues up to the eighth week of fetal life, sometimes persisting throughout life, and in some of the lower animals does so always, the foramen cecum at the base of the tongue being the remains of the opening of this duct.

The function of this gland is most apparent in infancy and adolescence, because this is the developmental period, and the checking of this secretion developing at that time causes an absolute cessation of the development of the body and mind.

The essayist states that some of the symptoms may persist throughout the life of the individual, and we know that once developed traces always persist. One of the gentlemen states that the gland is

not a cure, as when the treatment is discontinued the condition returns. In the absence of the gland secretion no cure is possible, and we can only substitute by administering the extract, which treatment must be continued indefinitely.

As to prognosis, it is only in early years that there is hope for results. We can look for results up to twenty years. After that we can only keep them comfortable and clean.

Dr. Zimmermann—Mr. President: I am glad Dr. Kiefer read a paper on this subject, because it is rather out of the ordinary, and these are the cases that do no good. When we come to study the ultimate causes of this condition we are carried into the unknown realms. We say that cretinism is due to the absence of the thyroid gland, or to some disease that renders the gland functionally inactive, and that is as far as we can go. In fact, all that is beyond is purely theoretical, and that carries us to the great unknown realm that is being so vigorously explored by the Germans at the present time, and in all probability it will be found that the material which is secreted by this gland is one of the enzymes that they are writing so much of at the present time. In fact, Loeb, who created such a furor in the lay press about a year ago in regard to his physiological researches, has demonstrated that codein is found in the thyroid gland, and so far as is known at the present time it is not found in any other organ or organs of the body; that is, it has not been demonstrated at all times in other organs of the body. So in all probability the nature of a ferment or enzyme, which has something to do with controlling the atrophic state of the organs or disposing of this material that is deposited in the subcutaneous tissues in this disease.

I have seen only one case of cretinism, and it was not exactly as Dr. Kiefer described. In my case the child was always running up to the mirror making faces at it; always on the roam. I had always thought a cretin was apathetic and dull, and did not move around in this way.

I have treated one case of myxedema, which in the adult corresponds to cretinism in the child. This case responded very rapidly to the thyroid treatment. She has since refused to take the thyroid extract, but has had no return of the myxedema. Her skin, which was very thick, has become thin, and her color has regained its normal appearance, and her speech, which was slow and hesitating, has changed, and she now speaks very well. Her temperature was subnormal. A great many of the symptoms have disappeared entirely, and it has been more

than a year now since she has had a dose of the extract. Whether the gland is now performing its function I am unable to say.

Dr. Kiefer (closing discussion)—Mr. President: In regard to the thyroid treatment, I will say that I am now giving him two grains three times a day. If progress continues I shall increase the dose, keeping a close watch on him for any alarming symptoms that may appear.

REPORT OF CLINICAL CASES.

Dr. Speidel—Mr. President: I would like to report a case of cancer of the cervix uteri, with rapid termination. Two years ago I was called to see a woman aged sixty, who had had a hemorrhage from the vagina, which she supposed to be a return of the menstrual flow. Upon vaginal examination I made a diagnosis of cancer of the cervix. I informed the family of the nature of the disease, but left the patient in ignorance of her condition. Strange to say, the case continued for two years without showing any of the major symptoms of cancer. There were only two hemorrhages. She had no pain whatever. She presented to me the appearance of sepsis; the tongue was always heavily coated. The only thing she complained of was indigestion. She believed that her sole trouble was with her stomach. Her condition became more grave, and about two weeks ago she had severe abdominal pains. I gave her a large dose of calomel, and followed it with castor oil. I then made a vaginal examination, and found the advance the cancer had made. I found the entire vaginal vault filled with the mass, and everything fixed. There was an involvement of the rectum, but none of the bladder. I introduced a colon tube and used a pint of olive oil. The entire amount was retained, but no action followed. I used purgatives by mouth, and finally resorted to an enema of ox gall without result. I knew then that I had a paresis of the intestines as a result of the cancer and septic conditions, and used morphine to relieve her. She died after being in this condition four days.

Dr. J. R. Wathen—Mr. President: I have here tonight to present to the society two radiographs of a rather interesting case of gunshot wound, sent to me to-day for diagnosis and treatment by Dr. Brady, of Columbia, Ky. The patient is a young man of twenty-six, who received an extensive wound of the knee from a 38-caliber revolver about three or four months ago. The ball entered the inner side of the thigh just above the knee and passed out below. He has since been able to walk with the use of a cane or crutches, but has not been

able to completely flex or extend the limb. In order to determine the exact condition of the leg I made the radiographs, which I would like the members of the society to examine and give me their ideas in regard to treatment and diagnosis in the case. In the first one I have here we can see the condyle of the femur torn off. This picture, taken laterally, apparently shows no ankylosis. It is an interesting case. He is a prominent patient, and for that reason I want to give him the best treatment.

I might add something which Dr. Hays' question has brought up, whether the knee should be massaged or whether it should be put at rest. The injury is three months old, showing an inflamed condition which I know to be there. There is a possibility of making it worse. If massage is indicated I would like to know whether it would increase the inflammation.

Dr. Gossett—Mr. President: I would like to report a case of a woman, aged fifty, upon whom three operations were done at one time. She had a ruptured perineum of nearly sixteen years' standing, nearly into the rectum. The womb had fallen, and the cervix was very near the entrance of the vagina. The anterior vaginal wall had prolapsed. She was taken to Sts. Mary and Elizabeth Hospital, and Dr. Abell performed the three operations. He did an anterior colporhaphy, then repaired the perineum, and then did a ventral fixation or suspension of the uterus. The recovery she made was remarkable. She got well as promptly as a woman of thirty.

Dr. Hibbitt—Mr. President: I would like to ask one question: Was it a ventral fixation or suspension?

Dr. Gossett—Mr. President: I don't know what you call the operation; the anterior wall of the uterus was stitched to the anterior wall of the abdomen with silk. It was fixation. I know it was.

INDIANA STATE BOARD QUESTIONS FOR 1904.

PHYSIOLOGY.

1. Define physiology.
 2. Explain the mechanical effect of respiration upon the blood pressure.
 3. What are the principal conditions which influence secretion?
 4. What are the constituents of milk?
 5. Name five of the best fat-producing foods in the order of their value as such.
 6. Name five nitrogenous foods in order of their nutritive value.
 7. Name four non-nitrogenous foods in the order of their nutritive value.
 8. What are the requisites of a normal diet?
 9. What is meant by muscular co-ordination and upon what does it depend?
 10. How would you estimate the amount of sugar in a given volume of saccharine urine?
- Submitted by W. A. Spurgeon, M.D., July, 1904.

ANATOMY.

1. Give the origin, course and distribution of the pneumogastric nerve.
 2. What are the names of the groups of the spinal nerves, and the number in each group?
 3. Give a brief general description of the sympathetic nervous system.
 4. Describe the diaphragm.
 5. Between what points on the anterior chest surface are the cardiac valves?
 6. Describe and give the elements of a ginglymus joint.
 7. Give the names and relation to each other of the tendons passing over the wrist joint.
 8. What muscles have attachment to the upper extremity of the ulna?
 9. Give the names and relation to the bones of blood vessels found on cross section at the middle of the forearm.
 10. What nerves are divided by cross section at the middle of the leg?
- Submitted by W. A. Spurgeon, M.D., July, 1904.

CHEMISTRY.

1. What is an ion?
 2. What properties are common to all acids?
 3. Give the chemical name and formula of "laughing gas."
 4. Write a formula showing the action of sulphuric acid on sodium chloride.
 5. Give : $\left\{ \begin{array}{l} (a) \text{ Specific gravity of healthy urine.} \\ (b) \text{ A reliable test for albumin in the urine.} \\ (c) \text{ A reliable test for sugar in the urine.} \end{array} \right.$
 6. Give the definition and the graphic formula of a phenol.
 7. What proteids are found in milk?
 8. What is the formula for glycogen, where is it found, and what is it converted into by dilute acids?
 9. Give the graphic formula of : $\left\{ \begin{array}{l} (a) \text{ Ethyl alcohol.} \\ (b) \text{ Acetic acid.} \\ (c) \text{ Benzene.} \\ (d) \text{ Salicylic acid.} \end{array} \right.$
 10. What do you understand by the open and closed chain series?
- Submitted by J. M. Dinnen, M.D., July, 1904.

HISTOLOGY.

1. Define histology.
 2. Describe the histology of an artery.
 3. Describe the histology of a vein.
 4. Describe the histology of the skin.
 5. Describe the histology of a pulmonary air cell.
- Submitted by J. C. Webster, M.D., July, 1904.

MATERIA MEDICA AND THERAPEUTICS.

[Regular.]

Answer briefly and concisely, in writing, the following questions :

1. Define the term synergistic and antagonistic, as applied to therapeutic agents, and give illustration.
2. Define physiologic action as applied to the action of therapeutic agents, and give illustration.
3. What is meant by the therapy of a medicinal agent ?
4. What is meant by the term analgesic as applied to the action of therapeutic agents ? Give example.
5. Give the physiologic action of opium, its therapy, a synergist, and an antagonist.
6. What is meant by the term eliminants as applied to therapeutic agents ?
7. Name some agents which increase cutaneous action.
8. Name some agents which increase renal action.
9. Name some agents indicated in a septic condition of the alimentary tract.
10. Name some agents indicated in a septic condition of the urinary tract.

Submitted by J. C. Webster, M.D., July, 1904.

BACTERIOLOGY.

1. Describe the leprosy bacillus.
2. Describe the method you would use to grow an anerobic bacteria.
3. How would you proceed to find the number of bacteria, per cubic centimeter, in water ?
4. How would you demonstrate the presence of anthrax bacilli in a kidney of an animal which had died of general anthrax infection ?
5. Describe Neisser's method of staining the bacillus diphtheriae ?

Submitted by W. A. Spurgeon, M.D., July, 1904.

HYGIENE.

Answer briefly and concisely, in writing, the following questions :

1. Define hygiene.
2. What hygienic measures should be observed by the operator, his assistants, in the preparation of the operating room and the patient for a surgical operation ?
3. Describe the technic of the hygienic measures to be observed in the preparation of the physician, his assistants, the lying-in room, and the patient, in the management of an obstetrical case.
4. Outline the hygienic management of pulmonary tuberculosis.
5. What hygienic measures should be observed in the management of croupous pneumonia ?

PATHOLOGY.

1. What is meant by immunity, and how is it produced ?
2. What is the pathology of croupous pneumonia ?
3. What do you understand by passive hyperemia ?
4. Mention the pathologic conditions in dyspepsia.
5. Give the pathologic characteristics in carcinoma.

MEDICAL JURISPRUDENCE.

1. Enumerate the causes of sudden death.
2. Give an example of criminal malpractice.
3. Give the characteristic post-mortem findings in gas poisoning.
4. Give the difference between an incised wound made before and one made after death.
5. On what findings would you testify that rape had been committed ?

Submitted by J. M. Dinnen, M.D., July, 1904.

RHINOLOGY.

1. Give the treatment of *ozena*.
2. Give the etiology and treatment of nasal mucous polypi.
3. Give the cause of fetid discharges from the nose.
4. Give the treatment of acute catarrhal rhinitis.
5. What acute infectious diseases are frequently ushered in by a *coryza*?

LARYNGOLOGY.

1. Describe the larynx.
2. Give treatment of subacute laryngitis.
3. Give etiology and treatment of edema of the larynx.
4. Describe tracheotomy.
5. Give the differential diagnosis of tuberculosis of the larynx.

OPHTHALMOLOGY.

1. Define the range or power of accommodation.
2. Give etiology and treatment of blepharitis.
3. Give causes, symptoms, diagnosis and treatment of interstitial keratitis.
4. Give causes, symptoms and treatment of purulent inflammation of the vitreous.
5. Give pathology, diagnosis and treatment of choroidal sarcoma.

OTOLOGY.

1. Give Politzer's method for effecting the permeability of the Eustachian tube.
2. Give diagnosis, prognosis and treatment of acute inflammation of the middle ear.
3. Give diagnosis and treatment of hyperemia of the labyrinth.
4. What cerebral diseases are associated with disturbances of hearing?
5. Give the physiology of the sound-conducting apparatus.

Submitted by M. S. Canfield, M.D., July, 1904.

GYNECOLOGY.

1. Define plastic operations as applied to gynecology.
2. Define kraurosis vulvae and give treatment.
3. Give etiology, pathology and treatment of acute parametritis.
4. What are the indications for hysterectomy? Give technique of vaginal hysterectomy.
5. Define the term ovariectomy. By whom was the operation first performed?
6. What are the symptomatic indications for curettage. Give steps of operation.
7. Give differentiation between inflammation of Skene's glands and caruncle of the urethra.
8. Give differential diagnosis of ascites and ovarian cysts.
9. Give differential diagnosis of impaction of the faeces from pelvic peritonitis.
10. Stenosis of the cervix—give etiology, symptoms and treatment.

Submitted by M. S. Canfield, M.D., July, 1904.

THEORY AND PRACTICE.

[Regular.]

Answer briefly and concisely, in writing, the following questions:

1. Describe method of physical examination of the chest.
2. Define (*a*) subjective and (*b*) objective symptoms.
3. Give location of normal apex beat of heart.
4. What is the pathologic significance of its displacement to the (*a*) right, (*b*) left?
5. What are the subjective and objective symptoms of mitral regurgitation?
6. Describe the normal respiratory sounds and movements.
7. Give objective and subjective symptoms of pulmonary emphysema.
8. How would you develop the patellar reflex, and what is the pathologic significance of its absence?
9. Give etiology, symptoms, most common complications and treatment of scarlatina.
10. Give common cause, symptoms and treatment of infantile diarrhea.

Submitted by J. C. Webster, M.D., July, 1904.

SURGERY.

1. What structures would be cut, and how would you identify each in the usual muscle splitting operation for appendicitis?
2. Give differential diagnosis between acute infectious osteomyelitis and tubercular osteomyelitis involving one of the long bones.³
3. Name the differential clinical and pathological points between a malignant and a benign neoplasm.
4. How would you treat a fracture of the neck of the femur in a woman seventy years of age?
5. Give the differential diagnosis between a stone in the kidney and one in the urinary bladder.
6. Etiology and classification of goiters.
7. Give differential diagnosis between (*a*) concussion of the brain, (*b*) fracture of the base of the skull, and (*c*) rupture of the middle meningeal artery.
8. How would you treat a compound fracture of the lower third of the leg in which the fragments of both tibia and fibula protrude?
9. What symptoms would lead you to think that a patient was suffering from a concealed hemorrhage after a laparotomy?
10. What are the surgical landmarks of the elbow joint, and how would their positions aid you in making a diagnosis between a fracture of the lower end of the radius and a posterior dislocation of the ulna?

Submitted by J. M. Dinnen, M.D., July, 1904.

OBSTETRICS.

1. Give name and number of the bones that constitute the human pelvis.
2. Give differential description of the male and female pelvis.
3. Give the normal diameters of the superior and inferior straits of the female pelvis.
4. Describe the uterus and its appendages.
5. What treatment would you employ in recent laceration of the os uteri?
6. Define lochia, and state the influences which modify it.
7. Name the causes of sterility in the female, and give treatment.
8. Describe the proper method of resuscitation of the newly born.
9. Give cause and treatment of colic in young babies.
10. Give the indication for the use of ergot in obstetric practice.

Submitted by W. T. Gott, M.D., July, 1904.

DERMATOLOGY.

1. Describe erysipelas and give treatment.
2. Define equinia and give a synonym.
3. What is anthrax? Give treatment.
4. Give symptoms, etiology and treatment of impetigo contagiosa.
5. Give treatment and etiology of hyperidrosis.

Submitted by W. T. Gott, M.D., July, 1904.

Notices.

EXAMINATION FOR ARMY MEDICAL SERVICE.

The examination of applicants for commission in the medical corps of the army will be materially modified after July 1, 1904, when the amended regulations governing the matter will go into effect. Immediate appointment of applicants after physical and professional examination, the latter embracing all subjects of a medical education, will be resorted to, but all applicants will be subjected to a preliminary examination and a final or qualifying examination, with a course of instruction at the Army Medical School in Washington intervening.

The preliminary examination will consist of a rigid inquiry into the physical qualifications of applicants and written examination in the following subjects: Mathematics (arithmetic, algebra and plane geometry); geography, history (especially of the United States); Latin grammar and reading of easy Latin prose; English grammar, orthography, composition, anatomy, physiology, chemistry and physics; materia medica and therapeutics; normal histology. The subjects in general education above mentioned are an essential part of the examination, and can not under any circumstances be waived.

The preliminary examination will be conducted concurrently throughout the United States by boards of medical officers at most convenient points; the questions submitted to all applicants will be identical, thus assuring a thoroughly non-bijective feature, and all papers will be collected and graded by an Army Medical Board in Washington. Applicants who attain a general average of 80 per cent. and upwards in this examination will be employed as contract surgeons, and ordered to the Army Medical School for instruction as candidates for admission to the medical corps of the army; if, however, a greater number of applicants attain the required average than can be accommodated at the school, the requisite number will be selected according to relative standing in the examination.

The course of instruction at the Army Medical School will consist of lectures and practical work in subjects peculiarly appropriate to the duties which a medical officer is called upon to perform. While at this school the students will be held under military discipline, and character, habits and general deportment closely observed.

The final or qualifying examination will be held at the close of the school term, and will comprise the subjects taught in the school, together with the following professional subjects not included in the preliminary examination: Surgery, practice of medicine, diseases of women and children, obstetrics, hygiene, bacteriology and pathology. General aptitude will be marked from observation during the school term. A general average of 80 per cent. in this examination will be required as qualifying for appointment, and candidates attaining the highest percentages will be selected for commission to the extent of the existing vacancies in the medical department. Candidates who attain the requisite general average who fail to receive commissions will be given certificates of graduation at the school, and will be preferred for appointment as medical officers of volunteers or for employment as contract surgeons; they will also be given opportunity to take the qualifying examination with the next succeeding class.

It is not thought that, for the present at least, the number successfully passing the preliminary examination will be greater than can be accommodated at the Army Medical School, nor that the number qualifying for appointment will exceed the number of vacancies. If, however, the class of candidates qualifying should be larger than reasonably thought, the young physicians who fail to receive commissions will not have wasted their time, as the course of instruction at the school, while in a large measure specialized to army needs, is such as will better adapt them to their professional pursuits, and furthermore they will have received a fair compensation for their instruction.

Admission to the preliminary examination can be had only upon invitation from the Surgeon

General of the Army, issued after formal application to the Secretary of War for permission to appear for examination. No applicant whose age exceeds thirty years will be permitted to take the examination, and the authorities at the War Department desire it distinctly understood that this limit of age will be rigidly adhered to. Hospital training and practical experience are essential requisites, and an applicant will be expected to present evidence of one year's hospital experience or its equivalent (two years) in practice.

The first preliminary examination under the amended regulations above referred to will be held about August 1, 1904; those desiring to enter the same should at once communicate with the Surgeon General of the Army, Washington, D. C., who will be pleased to furnish all possible information in regard thereto.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended June 30, 1904:

CARRINGTON, P. M., Surgeon—To proceed to certain points on the El Paso & Northeastern Railway for special temporary duty, June 23, 1904.

TRASK, J. W., Assistant Surgeon—Relieved from duty at Fort Stanton, N. M., and directed to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters. June 28, 1904.

MOORE, G. F., Acting Assistant Surgeon—Granted leave of absence for seven days from July 3, 1904, under provisions of Paragraph 210 of the regulations.

STEUART, G. H., Acting Assistant Surgeon—Granted leave of absence for fourteen days from July 1st. June 29, 1904.

ANNOUNCEMENT.

The next meeting of the Pan-American Congress will be held in Panama the latter part of December.

The Panama-American Congress meets every three years. It was started by Dr. William Pepper, of Philadelphia; Dr. A. L. Reed, of Cincinnati; Dr. Albert Van der Veer, of Albany, and Dr. H. L. E. Johnson, of Washington.

The first meeting was held in Washington, in September, 1893, the second in Mexico, in 1896. The third was to have been held in Venezuela, in 1899, but was given up on account of the war in that country. The place of meeting was changed to Cuba, but had to be postponed until 1901 on account of the fever there.

These meetings have always been well attended, and it is thought that Panama will be an interesting place for the Convention.

Further particulars will be sent out from time to time to THE AMERICAN PRACTITIONER AND NEWS, together with notifications of the different officers appointed to represent this and other countries.

Very respectfully,

RAMON GUITERAS,

Secretary of the International Executive Committee.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

VOL. XXXVIII. LOUISVILLE, KY., AUGUST 1, 1904. No. 153.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. RUSKIN.

Original Articles.

A CASE OF ABSCESS OF THE BRAIN FOLLOWING ACUTE SUPPURATIVE OTITIS MEDIA, WITH REMARKS.*

BY ISAAC LEDERMAN, A. B., M. D.

Lecturer in Otolaryngology and Rhinology University of Louisville; Visiting Ophthalmologist and Otolaryngologist Louisville City Hospital.

The patient, a young man nineteen years old, medical student, contracted measles in February, during the course of which abscess of middle ear developed. Free paracentesis gave relief from pain and exit to a quantity of aqueous pus. The suppuration, however, continued, and in the course of a few weeks mastoid tenderness and edema developed. After the fever attributable to measles had subsided there was no elevation of temperature and pulse remained normal. The pain, however, continued in the ear and head. On March 26th a mastoid operation was performed, revealing extensive destruction of mastoid cells. Complete mastoidectomy was done, and communication with the middle ear freely established. The progress of the case was entirely satisfactory, and he was discharged from the infirmary April 6th. After a visit of a few days to his home he resumed his studies, the wound being dressed at the office twice a week. Healing was rapid and uninterrupted, the mastoid wound granulating nicely. The suppuration in the middle ear, continued, however, draining

* Read at the meeting of the Society of Physicians and Surgeons July 21, 1904.

through the opening posteriorly. As he was free from pain and his general condition improved steadily this caused no alarm, and he was assured that the suppuration would eventually cease and healing be complete. The symptoms of his last and fatal illness came suddenly. On June 12th he reported at the office, having the appearance of a very sick man. His temperature was 103° , pulse 100. A chill of moderate severity had preceded the fever; he was suffering great pain in the ear and head; tongue coated and pain in the abdomen. The discharge from the middle ear cavity had ceased entirely and the drum membrane was bulging. Dr. Casper examined him later in the day, and believed his symptoms might be due to constipation, sluggish portal circulation and possibly malarial infection. Operative measures were, therefore, postponed. The patient was given purgatives and quinine, the ear was treated with oft repeated hot irrigations and hot applications. The next day found him much improved, temperature 101° , pulse 76, pain only slight. Profuse discharge of pus had become re-established through the mastoid opening. On the next day the temperature was normal, but on the following day he complained again of severe pain in the temporal region, constipation was obstinate, and drowsiness became apparent. During this time narcotics were not used with the exception of an occasional dose of heroin. Temperature was normal, pulse 80, at 12 o'clock on the day of operation, June 16th.

The operation consisted of curetting away granulations leading from the antrum to the tympanic cavity. A portion of the posterior wall of the auditory canal was removed and the base of the zygoma thoroughly curetted. The contents of the middle ear were not disturbed, as no evidences of complications could be found at the time of the operation. The drum membrane was freely incised. On the following day temperature ranged from normal to $99\frac{1}{2}^{\circ}$, pulse 68 to 74. Pain only partially relieved. The dressings were removed the next day, and the wound found apparently in good condition, with slight secretion. Pain, however, persisted. Temperature 98 to 100, pulse 62 to 72. I left the city on the evening of the next day, Dr. Ray taking charge of the case, and to him I am indebted for the faithful care the patient received and for the further notes.

From this date, 18th to the 29th, his temperature was usually normal, dropping to 98° several times and rising to 101° on one occasion. Pulse observed no regularity, ranging from 60 to 88. The pain persisted, constipation required frequent attention; his mentality was slightly clouded, the patient being apathetic, and slept a great deal, but

could be aroused, and would answer questions readily. Anorexia was marked, on one occasion the patient refusing food. There were no aphasic or paralytic symptoms. Pupillary reaction normal. No optic neuritis. After observing the patient's condition for a few days Dr. Ray felt justified in the diagnosis of cerebral abscess, and suggested operation. This was refused by the patient's family, they agreeing to have only such measures taken as would not further endanger life.

June 29th, ear canal swollen, showing retention of pus in the middle ear. Pulse accelerated, temperature elevated slightly. The operation by Dr. Ray consisted of further reduction of the posterior canal wall, removal of ossicles, with free incision of the drum membrane, evacuating pus. The middle ear cavity curetted, bone found roughened, but no sinus in roof of tympanum. The eustachian opening was found to be widely dilated, the probe entering it readily. The patient withstood the anesthetic very poorly, and his condition now becoming dangerous further operative procedure was deemed unsafe. On the following day the patient felt much better, no pain, mentality clear; he smiled and conversed cheerfully. Temperature 99° , pulse 72. On the following night the pain returned, temperature began to rise, and pulse to become more rapid. A slight convulsion was followed by gradually increasing coma. Paralysis of the third nerve became evident. The temperature in twenty-four hours had reached $104\frac{1}{2}$, pulse 130. The coma deepened until death took place twenty-four hours after the convulsion. It is to be regretted that a post-mortem could not be obtained.

The study of this unfortunate case suggests to me a few remarks, and especially does it seem of interest to compare the classical recognized symptoms of cerebral abscess. That this case was one of abscess of the temporo sphenoidal lobe, and that it existed at the time of the second operation, there is no doubt in my mind. Likewise am I convinced that infection of the brain took place at a period subsequent to the first operation. It is with no feeling of shame that I admit my failure to make a complete diagnosis prior to and at the time of the second operation, as the symptoms, though suspicious, could easily have been accounted for by retention of pus in the middle ear or a possible co-incident disease. It demonstrates that the diagnosis of brain lesions is exceedingly difficult in the absence of the recognized symptoms.

While middle ear suppuration plays an important part in the etiology of intra-cranial lesions, yet acute processes seldom cause cerebral abscess, nearly all instances in which it occurs being those chronic

suppurations in which the mucous membrane is disintegrated and osseous erosion of the tegmen tympani follows, the pus burrowing in the direction of least resistance. When it does occur in acute suppuration, the virulence of infection, the anatomical and physiological construction of the parts and vital resistance are the factors which make it possible. Macewen has aptly called the tympanic cavity a model incubating chamber for micro-organisms, for here they find their nutritive pabulum, sufficient and constant warmth, and all other elements which assist their growth. As to the character of infection, there seems to be no one organism alone to which this complication can be attributed. In the pus of brain abscesses the staphylococcus, aureus and streptococcus are invariably found. To the staphylococcus and streptococcus may be added the diplococcus pneumonia of Frankel and the tubercle bacillus. In the greenish yellow pus the bacillus pyocyaneus is found, while in the thin, offensive pus the bacillus foetidus is added. Though the latter is capable of producing suppuration, non-odorous pus is considered equally as dangerous.

Abscess in the tympanic cavity finds a slender barrier between it and the cranial cavity formed by the tegmen tympani and antri, hence the tendency is strong for purulent infection and destruction to advance in this direction. In children there is added the petro-squamosal suture which offers a splendid pathway for purulent invasion of the cranial cavity. The path of infection need not necessarily be through an opening in the tegmen. Thrombosis of blood vessels of the mucous membrane may spread to the vessels of the bone, and thence to the intra-cranial structures. Another manner of formation of cerebral abscess is the extension of septic thrombosis to the pial blood vessels, causing ulceration of the brain; the membranes having become firmly adherent to the surrounding inflammation serves to wall off a cavity which fills with pus from the ulceration. This simulates cerebral abscess, and a true cerebral abscess follows from passage of pus into the white substance. We do not always, therefore, find an opening into the cranium by which infection has entered. Gruber reports a case in his text book of an abscess of the cerebrum found at post-mortem three months after an acute otitis and mastoiditis had been cured, the patient being in the meantime to all appearances healthy.

An abscess of the brain varies greatly in size, it may contain a few drops or several ounces of pus. It is surrounded by an area of purulent encephalitis, consisting of inflamed tissue, hyperemic or thrombosed blood vessels and extravasated red blood corpuscles and

exudation cells. Sloughs of brain tissue may be found. Hemorrhage into the abscess may take place from rapid destruction of brain tissue. When, however, the disintegration is slow, bleeding is prevented by thrombosis of the blood vessels. A zone of edema surrounds this area of encephalitis, and may exert pressure on a portion of the brain some distance from the location of the abscess, and by giving rise to localized symptoms indicate a false position of the abscess. The area affected by this encephalitis is by no means uniform or in ratio to the size of the abscess, and therefore the pressure symptoms are not reliable as indicating the size of the abscess cavity. It follows that the location and the amount of surrounding inflammation determines the degree of immediate danger, as a small accumulation in a vital part will cause death early, while in the temporo-sphenoidal abscess the entire lobe may be destroyed before serious symptoms arise. Multiple abscesses of the brain are very rare when due to ear disease; it is estimated that four-fifths of the multiple variety come in pyemia.

That the paths leading to intra-cranial infection are numerous is proven by the fact that lung pigment has been found in cerebral abscesses secondary to pulmonary suppuration (Bottcher), and that the *oidium albicans* affecting the mouth and pharynx has entered the blood and caused cerebral suppuration, the *oidium* being demonstrated in the abscess (Zenker).

Abscess of the brain causes death in several ways. There may be a slow oozing of pus into the membrane or ventricles, or it may rupture suddenly into the subdural space, giving rise to suppurative leptomeningitis, or it may rupture into the lateral ventricles, and in this instance violent suppurative lepto-meningitis and rapid death ensue. Abscesses have been known to empty themselves externally by erosion through the dura and skull. This has occurred in children. In adults cases are on record where the abscess has drained through an opening in the tegmen tympani, and Macewen reports a case of spontaneous relief in this manner. In another case reported by Gruber the ear was perfectly healthy, the capsule of the abscess, likewise the dura and bone of the tegmen tympani had allowed exit of the pus as the result of pressure. The surrounding pia and dura being adherent from the attending inflammation served to protect the cranial cavity. The term "*otorrhea cerebialis*" was given this condition. It is very rare that cases can be considered safely cured in this way, for the opening communicates with the abscess by a narrow, tortuous channel,

which may easily become occluded by granulation tissue and death speedily ensue unless surgical measures are promptly resorted to.

Encapsulation of the abscess may occur when the brain tissue possesses sufficient vitality to take on formative action. Then fibrin is thrown out in sufficient quantity to bind together all the products of disintegration surrounding the abscess. Leukocytes travel through it from the surrounding healthy tissue; primitive blood vessels resembling those of granulation tissue spring up from and project into the wall in process of formation. This forms a capsule of low vitality, but sufficient to shut off the living tissue from infection. The pressure exerted through this capsule by the surrounding brain tissue aids in the absorption of the fluid portion of the pus. Then well formed blood vessels may penetrate the capsule and assist in absorption of the remaining debris. In this manner it is possible that a small abscess may be entirely absorbed, but there is no positive proof of this. Encapsulation does not insure safety to the patient. Granulation tissue may spring up in the wall of the capsule, thus increasing the quantity of pus, which may be sufficient to dilate the capsule until it ruptures. Again, it may act as a foreign body, and be the exciting cause of fresh abscesses outside its wall. Calcification of the capsule and its contents is a rare but possible occurrence. The portion of the brain most often affected by abscess, when due to otitis media, is the temporo-sphenoidal lobe, next the cerebellum. Gower's statistics show in all cases the cerebrum to be affected four times as often as the cerebellum while the pons and medulla are very rarely affected.

The uncomplicated cerebral abscess runs a course of from two to six weeks, while when encapsulation takes place it may lie dormant for months and years, Gowers mentioning a case of death after twenty years. The nature of the specific organisms and the origin of the abscess influence its severity. When resulting from otitis media it usually runs a very rapid course.

It is always, under any circumstances, fraught with the greatest danger, the degree of which depends upon the size and location of the abscess. Even when encysted it is a constant menace until absorption has become complete. Occasionally in encysted abscess the "soldering" of the brain to the skull and dura causes trouble, such as faintness or even unconsciousness after sudden exertion or exposure to heat.

The symptoms of cerebral abscess may be divided into three distinct stages.

First stage.—The initiatory symptoms often develop suddenly,

when coming in the course of otitis, with earache. The pain extends to the temporal region of the affected side. It rapidly increases in severity, and causes excruciating agony at times. It may be intermittent or constant, and is often referred to the forehead.

Vomiting frequently occurs without the presence of gastric derangement, probably while the stomach is empty and often without nausea.

A rigor ushers in the symptoms, and may vary in intensity from a mere sensation of cold to a violent shaking chill. It lasts from a few minutes to a half hour, but is not often repeated.

Temperature is above normal, pulse slightly accelerated, and there is general prostration.

The secretion of pus from the middle ear ceases altogether or is greatly diminished.

This stage lasts from twelve to seventy-two hours, or possibly a week. Again, it may be entirely absent, or be simulated by other acute febrile conditions, such as acute suppurative otitis media, many cases of which are ushered in by symptoms differing in no wise from these. The surgeon rarely has the opportunity of observing this stage, and were he at the bedside from the very beginning a positive diagnosis would be impossible.

He most often finds the patient in the second stage, that of full development of the abscess, when all the senses are blunted. The pain, though still present, is not of that excruciating character; it is moderate in intensity, and often of so little consequence that the patient will not complain unless his attention is called to it. The diminishing of pressure or the influence of the surrounding encephalitis in deadening sensibility accounts for the change in this symptom. Tenderness is indicated by pressure over the squamous and mastoid portions of the temporal bone.

Evidences of slow cerebration are evinced by the manner of his answering questions. The patient has an expressionless face; if he smiles it is mechanical. He lies quietly, is constantly either staring into vacancy or sleeps. He pauses, the face impassive, after the simplest question, then the answer comes slowly, but usually correctly. Later he answers in monosyllables, as if incapable of mental exertion. Should a question of some length be propounded to him, the chances are he will be asleep before the interrogation point is reached. He will ask some service of his nurse or attendant, and before it can be complied with it will be necessary to rouse him again. The sleep,

though natural in appearance to the observer, does not refresh the patient. He passes gradually into the state when it is difficult to arouse him even for food. Physical strength wanes with the giving away of mental energy, and complete helplessness results.

The temperature is normal or subnormal, usually ranging from 97° to 99°. The pulse is always slow in an uncomplicated case, averaging 50 to 60, but may be as slow as 30. The slow pulse is a point of general diagnostic importance of intra-cranial disease, and is due to pressure. The pulse rate usually becomes slower as the size of the abscess increases, but this ratio does not always hold good. The same character of pulse may be caused by tumor or blood clot, and the lesion may even be extra dural.

Respiration is slow and regular, not typical in character (though when extremely slow or Cheyne Stokes it is indicative of a cerebeller lesion). Constipation of a most obstinate type is the rule in all intra-cranial affections, and especially cerebral abscess. The exception is infective sinus thrombosis, in which colliquative diarrhea usually occurs. This point is valuable in differential diagnosis.

Retention of urine frequently requires the use of the catheter, and small quantities of albumin are sometimes found, with no evidences of kidney involvement.

Complete anorexia is the rule. Vomiting is not usually a symptom of this stage of cerebral abscess. This is especially true if the patient lies quietly. Should he attempt to sit up vertigo and sudden vomiting, without preliminary nausea, is liable to occur. This is attributable to irritation of the gastric part of the vagus center, and accompanies all intra-cranial affections. When persistent it points to cerebeller abscess as the most probable condition.

Convulsions do not belong, as a rule, to this stage of temporo-sphenoidal abscess.

Paralysis may occur, but not until late, and then is the most valuable sign for localization. Emaciation is marked late in this stage. The behavior of the reflexes is uncertain and unreliable.

Optic neuritis is an almost common occurrence. But it comes late, and is seldom seen except in a far advanced case. Its absence, therefore, is of no value, while its presence aids in the diagnosis.

The disease, when uninterrupted, usually passes into the third or terminal stage, and death ensues in one of two ways: 1. By gradually increasing stupor or coma. 2. By leaking of pus into the ventricles or to the surface of the brain, or sudden rupture into these spaces.

The result of the gradual oozing of pus in the membrane of ventricles is the spread of irritation or inflammation, causing leptomeningitis. A new train of symptoms is instituted, consisting of vomiting, restlessness, temporary squint, flushing of skin, rigidity of limbs, clonic spasms, rapid respiration and pulse, and elevated temperature. The inflammatory zone may involve the pia mater without actual leakage of pus, and the result is the same. Rupture into the ventricle brings about the most rapid change, the pupils become dilated, face livid, respiration very rapid, shallow or stertorous. In a few hours the temperature goes up to 104° or 105° , pulse 120 or more. Muscular twitchings, convulsions, tetanic seizures (oposthotonos and emprosthotonos), followed by coma, and death comes to the relief of the unfortunate in six to twelve hours. The train of localizing symptoms are of no interest to us in this connection. Only on rare occasions do they present themselves in temporo-sphenoidal abscess, and then when the abscess has attained large proportions, or the surrounding inflammation is great in extent. Returning to our unfortunate case, which was the incentive for these remarks, we find he exhibited imperfectly a few of the symptoms of cerebral abscess. The persistence of his pain and its location behind the eye, as he described it, appeals to me as a most important sign. The mental state, though not extremely apathetic, was clouded. The loss of appetite and obstinate constipation were present; temperature and pulse were not typical, yet the absence of greater elevation of temperature and acceleration of pulse was at least a suspicious feature. Then the presence of a suppuration in the middle ear cavity of several months' duration and capable of spreading infection into the intra-cranial cavity must be looked upon as an important factor. It is true the symptoms were meager and not one of them pathogomonic, yet the diagnosis of temporo-sphenoidal abscess seems justifiable. The proof came immediately before the death of the patient, and consisted of the symptoms due most probably to rupture into the lateral ventricle. Had the operation been permitted and had the diagnosis been confirmed by the discovery of pus in the cranial cavity, what chances would the patient have had for recovery? These are McEwen's own words: "There is no cerebral affection more amenable to surgical treatment, and that offers better results, than abscess. An uncomplicated cerebral abscess whose position is clearly localized, if surgical measures are adopted for its relief at a sufficiently early period is one of the most hopeful of all cerebral affections. After aseptic evacuation of the abscess, not

only is the patient likely to recover but in many instances it leaves no perceptible permanent bodily damage."

To support this statement, he reports a series of nineteen cases operated by him, of which eighteen recovered.

LOUISVILLE, KY.

CHRONIC GASTRITIS.*

BY JOHN J. MOREN, M.D.

As gastritis is one of the most frequent organic affections of the stomach and being of interest to us all, a review of the subject is justifiable without apologies. As in all inflammatory conditions, it is either acute or chronic. Many authors have several sub-divisions of this classification; but to-night we will confine our review to the chronic form, commonly spoken of as chronic gastric catarrh. The clinical types mentioned by different authors are the simple, mucous, atrophic and acid gastritis. The existence of the later or acid gastritis is questioned by many, but Boas, who first described it, still contends that we do have free acid in normal or increased quantities in this particular form of gastritis.

As for the other three, their clinical manifestation are such that they are not questioned.

Pathologically, we have in gastritis a proliferation or atrophy of the glandular structure, hypertrophy or atrophy of the muscular layer and increased connective tissue. These different changes can not be distinguished by their manifestation, consequently the classification is purely clinical.

Does chronic gastritis include the so-called chronic dyspeptic? Many of the symptoms once attributed to catarrh are now known to arise from functional disorders. When the lot of chronic dyspeptics are sifted through a careful examination, the true cases of gastritis are comparatively few. Gastropylaxis, neuroses, intestinal indigestion and functional disorders from diseases of liver, constipation, errors in diet, etc., are found in the chronic dyspeptic. We must not forget that gastritis can occur or complicate any of these conditions.

The only way to arrive at any conclusion as to the pathology is by the mucus fragments found in the wash water. In fact, the stomach pathology has been materially aided by a study of these fragments, but

*Read before Louisville Society of Medicine and Surgery, June 18, 1904.

the real diagnostic aid is questioned. The articles by Einhorn, of this country, Cohnheinn, of Berlin, are well worth studying. Hemmeter claims glandular proliferations in two-thirds of the cases of hyperacidity and atrophy in three-fourths of the cases of anacidity. He concludes his analysis of all cases as follows: "On the whole, judging from Einhorn, Cohnheinn, Hayem and my own, the conclusions seem justifiable that proliferation of glandular elements are present in from one-half to two-thirds of the cases of hypoacidity, and atrophy is present in from one-half to two-thirds of the anacidity."

Einhorn, in a recent article, claims that the variation is too consistent to judge the secretory disorder. For instance, you find proliferation in cases of hyperacidity and atrophic and interstitial growth in hyperacidity. This does not seem so strange when we consider that the pyloric region suffers the first and the most. The fragment is only a small portion of the mucosa, and consequently not an expression of the stomach, but only of the particular area from which it came.

In the majority of cases the muscular power is very good, and few cases show dilatation. Those cases that do show motor insufficiency are the ones that show atrophic changes in the muscular layer.

The test meal will be of great service. In gastritis the secretions will be diminished, with an increase of mucus (stomach mucus). The meal will be digested in proportion to the gastric secretion. In the atrophic form digestion is practically nil except of the carbohydrates.

The amount of contents removed will be an index to the motor power.

Diagnosis.—This is not as easy as one would think. Reigel says that the subjective and objective symptoms found after an ordinary examination are not at all characteristic. He relies upon the analysis of the stomach contents.

In no line of work is a proper diagnosis more essential than in diseases of the stomach. If you know what is the trouble you know what to do; otherwise, you are absolutely in the dark. First exclude other diseases, as liver, heart, lung or pancreas, etc. Many of these cases present stomach symptoms which may mark the real or primary disorder.

The distinction from typical ulcer is not difficult, the age, onset and characteristic pain.

In these cases that might be called chronic ulcer the line is

drawn much closer. However, the picture is about the same. The test meal will clear doubt.

In the neuroses the age, nutrition and variation of symptoms are characteristic.

In advanced and severe cases of gastritis, particularly in people well advanced in life, the differential diagnosis from cancer is hard. Both show failing nutrition, diminished gastric secretion. Mucus is present in both. In cancer pain, lactic acid, insomnia (in fact, many cases of cancer have more gastric distress at night) are more uniformly present than in gastritis.

In the acid types you must distinguish hyperchlohydria, dilatation ulcer, gall stones and pyloric spasm. Mucus is never found in either of these except the acid gastritis.

The history that is alcoholic, and development of symptoms will help to complete the picture.

Treatment.—The secretions of the glands are diminished in all cases except the acid type. Consequently the administration of both hydrochloric acid and pepsin is essential. Many advocate large doses of acid, but this can not be practiced in all cases. I follow the individual susceptibility. Recently I treated a young man who had a total acidity of 4 c.c. (60 being normal) who could not tolerate acid in any dose.

We are contending with an affection in which there is loss of appetite and relish of food, both essential factors in good digestion. These may be overcome by the various bitter tonics which arouse the nerve supply, like *nux vomica*, *condurango* and *calumbo*. Dainty and tasteful food helps materially.

Other tonics, alteratives and tissue builders are indicated when the stomach will permit. But don't disgust your patient with a barrel of medicine. I prefer few medicines with a definite purpose, and allow the stomach to do its best with a special diet. If improvement take place you can be guided accordingly. Should there be no change, bitter tonics, alteratives, as arsenic, etc., must be used.

Fermentation and putrefaction must be guarded against. The diet is the most essential, varying it with the secretion and motor power. If the stomach empties itself at the proper time and the intestines do their work, mighty little fermentation will occur. Regular evacuation of the bowels is the best intestinal antiseptic. *Resorsin*, *salol*, etc., may be useful. Small doses of mercury is a splendid drug to combat flatulency, which often occurs in the intestines. Lavage is particularly

indicated when there is motor insufficiency. A thorough cleaning of the stomach not only removes the fermenting material, but it favorably affects the stomach and intestinal parastalsis. The addition of sodium bicarbonate, chloride or the anti-fermentatives, as salicylates, are good. After the stomach is washed nitrate of silver 1-1,000 may be used as a plain wash or by the introgastric spray. Many authors speak well of this drug.

Other measures used to stimulate the digestion and general nutrition are electricity and hydrotherapy. The former may be used either externally or by the introgastric electrode. I have undoubtedly seen good results follow the external application. Hydrotherapy is useful to relieve the congestions. It helps to relieve many of the subjective symptoms, as cold extremities, malaise, etc. The cold sponging, half bath, etc., surpasses the benefit derived from the morning walk.

What shall they eat? The diet should be guided by the state of secretion and motor power. Again, by the experience of the individual. You are all familiar how common it is to have a patient to tell you that he can not eat certain articles of food. This should not be neglected, but considered, barring the scientific reason for such diet. I do not favor too strict a diet; we are compelled to supply sufficient nourishment for force and strength. As the secretion of acid is diminished, one would rather favor a carbohydrate diet, but albumen and fat can be used. Pamlow showed that the secretion varied with diet. If carbohydrates were used alone, the secretions acted poorly upon albuminoids, and if the diet consisted of albuminoids the secretion acted poorly upon carbohydrates. This supports the view of some authors that diet has a physiological effect, and permits albuminoids in hyposecretion as a remedy as well as food. If dilatation is present with hyperacidity, albuminoids must be lessened or avoided. The diet should consist of food easily digested, and that which leaves the stomach in a comparatively short time. Good milk is a splendid diet for a short time when there is no motor insufficiency. If rennet is absent, but rennet-zymogen present, the addition of lime water is useful.

The solid food should be well and tastefully cooked. The frying pan is to be cast aside. Meats are best when chopped up fine, and the tendons and fat removed. This permits a more complete digestion.

The vegetables should be passed through a sieve, and those with coarse fibre should be avoided.

Their bread should be toasted or stale, beaten biscuit or light crackers.

The best form of fat is butter or cream. Some can use chocolate. Coffee and tea are to be questioned, and not over two glasses of liquid should be allowed at a meal.

The frequency of feeding is to be gauged in each individual case. In some only two meals a day is best; in others a small portion at frequent intervals is best.

The question of condiments is important. In some the use of these is very satisfactory; unfortunately, however, their use is nearly always overdone before the patient falls a victim to dyspepsia. Often an extra shake of the salt or pepper box is advisable, or a glass of light wine. It has been shown that alcohol, not exceeding 3 per cent, favors instead of retards digestion.

We have been referring to those cases who can retain food, but how about those where nothing will stick? This is a nutty problem, and we will be guided by the existing conditions. It may be a fermenting interstitial tract; it may be a constricted pylorus; it may be an impacted colon or gall bladder. All these should be excluded. The addition of Vichy or lime water to milk may be well, or peptonized milk. Peptonoids, particularly with capsicum, in alcoholic gastritis is good.

A question of interest to us and important to the patient is what watering places should we allow the patients to go to? All waters are advertised to cure dyspepsia, but the word dyspepsia no longer means any particular gastric condition other than bad digestion. Again, it has reached a point where we can determine, after a careful examination, what waters are likely to do good in a particular case. I am not an advocate of sending these cases away, for if these patients would drink as much water and exercise as much at home, they would have better advantages to improve than at the springs, but——what shall we do?

A water that is good for ulcer or hyperacid conditions is not suitable for hypoacidity. Waters useful for dyspepsia secondary to liver or intestinal disorders are not benefited by waters useful in gastritis. Nervous cases have no business around a mineral spring; plain old H_2O is best for them.

The saline alkali waters are best for gastritis. If we except the experiments of Pamlow, who showed the sodium chlorides and bicarbonates had no effect upon secretion, we can expect but little effect directly from saline waters. But it has a mechanical effect in

dissolving and removing the mucus. Again, it improves absorption and general nutrition.

Those complicated or dependent upon liver or intestinal disorders do best at the sulphate springs, as French Lick, Crab Orchard, etc. In cases of hypersecretion the alkali springs, or alkali sulphate, you are all familiar with the effect of carlsbad in ulcer. These cases should be tested for motor insufficiency, as hyperacidity is a common symptom in dilatation, a condition in which excessive drainage is to be avoided.

220 West Chestnut Street.

TWO NEGLECTED IMPORTANT CAUSES OF SICKNESS.

At the regular quarterly meeting of the Michigan State Board of Health, at Lansing, July 8, 1904, Dr. Baker, Special Committee on the subject, reported the results of an investigation of the prevalence in Michigan of gonorrhea and syphilis during the first half of 1904 as follows: Of the regular weekly board reports, made by representative physicians in general practice relative to sickness from twenty-nine prominent diseases, 27 per cent. of all the reports stated the presence of gonorrhea, and 22 per cent. stated the presence of syphilis. The reports were received from 29 cities, 32 villages and 3 townships. The average number of weeks gonorrhea was reported from each of the cities was 6.4 and of syphilis 5.8. In each village the average number of weekly reports of gonorrhea was 3.7 and of syphilis 2.5. In each township the average number of weekly reports of gonorrhea was 2.3, and of syphilis .7. Arranging the twenty-nine diseases in the order of their greatest reported prevalence, during the twenty-four weeks only five diseases exceeded gonorrhea and only nine exceeded syphilis in the apparent sickness therefrom. Much of the success of this investigation was due to the fact that the name of any individual having either of these diseases was not required; therefore the reports were very probably complete.

Progress of Medical and Surgical Science.

The Results of X-Ray Treatment.—By Samuel Beresford Childs, A.B., M.D., Denver, Col., Professor of Anatomy, Denver and Gross College of Medicine; Surgeon to Mercy Hospital.

In the valuable paper of Dr. Childs he deals only with the facts in regard to the use of the X-ray, and reports a number of interesting cases treated by him for different diseases supposed to be amenable to the ray. In his report he concludes with the following remarks:

First—The therapeutic field of greatest usefulness of the X-ray is with the superficial epithelioma, rodent ulcer and lupus vulgaris, when the area involved is conspicuous, as on the face or neck, and where the cosmetic result is particularly to be desired.

Second—Healing by the X-ray leaves the smallest and least perceptible scar; for when properly applied it destroys only diseased tissues, and particularly commends itself for use in those localities where it is undesirable to sacrifice the surrounding tissues.

Third—The X-ray is very efficacious in many obstinate cases which have resisted the ordinary methods of treatment, such as acne rosacea, chronic localized patches of eczema and psoriasis, lupus erythematosus and kindred skin diseases.

Fourth—The results in tuberculous glands, when no suppurating focus is present, are encouraging, and the enlarged masses of glands in Hodgkin's Disease appear to be susceptible to the treatment.

Fifth—The X-ray should not be applied to any operable, deep, malignant growth, with two exceptions: First, as pointed out by Coley, where an operation would sacrifice an extremity, and even in this case the value of the X-ray is uncertain, and is determined by a few weeks' trial; second, as pointed out by Pusey, with a view to limiting the operation by checking the growth when immediate operation is inadvisable.

Sixth—The ray may be of service in inoperable malignant growths by relieving pain, diminishing discharges, and lessening their offensiveness, and in many cases life may be prolonged in comparative comfort for a considerable time. Furthermore, from these apparently hopeless

cases a number of remarkable improvements and a few recoveries have been reported.

Seventh—The rays should be used as a profilactic against return after all operations for the removal of deep malignant growths.

Eighth—The area of exposure should be wide, and the intensity and quality of the rays should be adapted to each case.

It can be readily seen that in dealing with the X-ray in the treatment of disease we are dealing with a very powerful agent, capable of doing a vast amount of good when properly applied, but fraught with danger to the patient when used by the inexperienced, and to the operator when used in long experimentation. In the successful use of the rays we must have learned thoroughly by experience the intensity and quality of light which is best adapted to each individual case, also the proper distance of the light from the surface, and the length of the exposure required. The operator sails between Scylla and Charybdis, for too weak a light will not produce results and may even act as a stimulus to the growth, while too strong a light vigorously applied to an extensive surface where a large amount of tissue is liable to break down may overwhelm the system with a fatal toxemia.

In the use of the rays in malignant growths involving the internal organs, other than to lessen the pain and the discharge, very little is to be expected from its use, and to summarize, the sooner all operable cases are tackled with the knife in a merciless way and the X-rays saved to the last to be used as a profilactic against recurrence the better the chances for the non-recurrence of the growth.—*New York Medical Journal*.

The Immediate Repair of Lacerations of the Perineum, with Special Reference to Placing the Sutures in Position Before the Laceration Takes Place.—A. Laphorn Smith, of Montreal, Canada, in *American Medicine*, July 30, 1904, discusses the advisability of placing the sutures in position in the perineum before the laceration takes place, and claims that by so doing a more perfect coaptation of the lacerated structures is obtained.

He calls attention to the recognized fact that a laceration of the perineum, when left unrepaired, offers an inviting area for infection, and the open-mouthed lymphatics rapidly take up the toxins, sapremia or septicemia is liable to follow, or when the tear is small and the absorptive surface is limited, only a slight rise of temperature is the result, a condition frequently attributed to the milk, and to avoid these

secondary complications he advises the placing of the sutures before the tear takes place ; for when the sutures are placed while the tissues are in their normal relation a better apposition can be expected.

Just before the child's head comes down on the perineum the patient is anesthetized, and brought across the bed with feet held with a twisted sheet or leg holder. The perineum is sterilized with soap and brush and mercuric chlorid, and then when the large curved needle held firmly in the right hand, and with thumb of the left hand in the anus and the left forefinger in the vagina, the needle is entered at the base of the lesser lip on the patient's left side, and passed rapidly under the vagina about two and one-half inches above the fourchet, coming out at the corresponding point on the woman's right side. A silkworm gut suture is threaded in the needle with the right hand and the needle is withdrawn, followed by the suture, the ends of which are caught with a hemostat. A second one is passed in the same way an inch lower down, but taking in the muscles of the perineum.

We can generally tell beforehand, by the rigidity of the perineum, whether the tear is going to be a bad one or not ; in the former case we can put in a third stitch, which will take in the sphincter and on each side of the middle line. Delivery can now go on normally or artificially, but as soon as the placenta has been delivered the perineum is inspected under a good light and a stream of water, all clots being rubbed off with the finger ; the stitches are tied from above downward, when we find that there is absolutely accurate coaptation of the separated parts.

A good light is essential, for two reasons : First, to see how dirty the room is ; and, second, to see what we are doing. No wonder why some physicians say that they have never seen a laceration of the perineum ; their light is insufficient. The presence of silkworm gut sutures does not in any way interfere with the termination of labor, not even when forceps are used.

After placing the sutures if no laceration occurs no harm has been done, for it is little trouble to remove them, and if the perineum has been torn it is of great advantage to have them already in ; for one is less liable then to permit what he might consider a trivial lesion to go unattended to.

Emmet says that one might as well sew up a woman's drawers as to suture the skin of the perineum and not include the fascia and muscles, and how much more sure you are of a perfect apposition when the structures are included in the suture while in their normal relation.

THE AMERICAN PRACTITIONER AND NEWS

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Notices.

MULDRAUGH HILL MEDICAL SOCIETY.

The regular meeting of the Muldraugh Hill Medical Society will meet in the Circuit Court room, at Elizabethtown, Ky., on Thursday, August 11th, at 9 A. M. This society conforms to the rules of the State Society, and is always largely attended, drawing its members from different sections of the State, and its programme is made up by papers from some of the best men in the country. Every doctor is invited to attend and take part in the proceedings.

The following programme for the August meeting speaks for itself:

"Foreign Bodies in Eye, Ear and Nose," by Dr. Wm. Cheatham, Louisville, Ky. Discussion opened by Dr. M. F. Coomes, Louisville, Ky., and Dr. Conklin, Leitchfield, Ky.

"Terminations of Mastoid Abscess" by Dr. Ad. O. Plingst, Louisville, Ky. Discussion opened by Dr. William Cheatham, Louisville, Ky., and Dr. Ed. Smith, Hodgenville, Ky.

"Surgical Treatment of Hernia," by Dr. R. C. McChord, Lebanon, Ky. Discussion opened by Dr. Irvin Abell, Louisville, Ky., and Dr. C. Z. Aud, Cecilian, Ky.

"Congenital Malformations of the Rectum, with Report of a Case," by Dr. H. E. McKay, of Bardstown, Ky. Discussion opened by Dr. Basil M. Taylor, Greensburg, Ky., and Dr. J. V. Pruett, West Point, Ky.

"Spontaneous Fracture of the Ribs, with Report of a Case," by Dr. Hugh D. Rodman, Bardstown, Ky. Discussion opened by Dr. Adams, Mumfordsville, Ky., and Dr. W. H. Strother, Big Spring, Ky.

"Pathological Specimen, with Report of a Case," by Dr. D. C. Bowen, Nolin, Ky. Discussion opened by Dr. Louis Frank, Louisville, Ky., and Dr. J. T. Green, Leitchfield, Ky.

"Massage and Electricity Versus Osteopathy," by Dr. John English, Elizabethtown, Ky. Discussion opened by Dr. M. F. Coomes, Louisville, Ky., and Dr. J. F. Green, Leitchfield, Ky.

F. W. Samuel, Louisville, Ky., subject unannounced.

Dr. John Punton, Superintendent of the Punton Sanitarium or Home for Nervous Invalids at Kansas City, Mo., is adding a large addition to the Sanitarium building in response to an increased demand for accommodations by patients. There is also being built a large extension to the verandas, which will be used by the guests for places of recreation. The management of the Sanitarium appreciates the support received from the medical profession, and has great confidence in the continued success of the institution.

Dr. John Punton is the editor of *The Kansas City Medical Index-Lancet*.

The American Neurological Association meets at St. Louis, at the Planters' Hotel, instead of in the World's Fair Grounds, as originally planned. The sessions will last from 9 A. M. to 1 P. M. daily. A general invitation is extended to the medical profession.

Society Proceedings.

LOUISVILLE SOCIETY OF MEDICINE AND SURGERY, JUNE 18, 1904.

DISCUSSION OF PAPER AND REPORT OF CLINICAL CASES.

Dr. Witherspoon—Mr. President: These conditions of the stomach have an interest to me from the fact that I frequently see results in the rectum. Now, you will find the cases not only confined to the stomach, but where we have this mass passing on through the stomach and intestines, we will have an inflammation varying from a simple inflammation to an infection clean on down in the rectum. This mass being thrown out of the stomach with a hyperemic condition of the mucous membrane, it will pass on down to the rectum, where it is very irritating.

I recollect one case that illustrates this point very beautifully. He consulted a gentleman of this city, complaining of pain, especially on the passage of fecal matter. That case was treated here for some six or eight months, and was finally sent to Turek, who treated the case by heating the stomach. I don't think the general practitioner pays enough attention to the colon in these conditions.

Dr. Guest—Mr. President: I enjoyed Dr. Moren's paper very much. I want to say that I never could find the differentiation in the diagnosis of catarrhal gastritis. I have treated them all the same way. I would say that my results in treatment have not been more than fairly successful. If I could claim any one drug does more good than another it is aromatic spirits of ammonia, teaspoonful before meals. It seems to warm up the stomach and promote the flow of the gastric juice.

In regard to the stomach tube, I have about given up that method of treatment entirely. It always leaves a chronic constipation. Washing out the stomach does not do the intestines any good at all.

A second reason is that there is great danger of abrading the mucous membrane and the end of the tube, and starting an ulcer. I have always been fearful of it.

Now, I have used for the last seven or eight years a treatment with marked success. I treated Mrs. C., aged forty-two, hysterical and very nervous. She had had a chronic dyspepsia for twelve years.

She took every drug her brother had in the store, and had been to see eight different physicians. I advised the use of the stomach tube, but could never introduce the tube, and gave up in despair. When I had studied over the case I arranged to substitute something as nearly as possible to that. I told her to take a pitcher of water and drink four or five glasses, and after she went to bed to lie on her left side and drink as much water as she could. She could only take three glasses at first. Finally, she could take six. She was to lie in this position and use massage on the stomach. She promised me that she would carry out that treatment, and it produced a complete cure. It not only cured the dyspepsia, but the constipation. I like this method so well that I use it to the exclusion of everything else. I think I have cured from thirty to forty cases.

Dr. McKinney—Mr. President: I wish to express my appreciation of the doctor's paper. The few cases I have seen were acute cases. I believe that one reason why we do not get results in these cases is because we do not go as deeply into the diagnosis as we should. We allow the case to become chronic. I have used the stomach tube in a number of cases, and there has always been marked improvement. I have never met with any trouble like Dr. Guest speaks of, nor can I see any danger of an abrasion of the mucous membrane. I think Dr. Guest's treatment is original, to say the least, and I can readily see how beneficial results would come from it. That quantity of water taken into the stomach would be beneficial to it, and I believe that any patient you could induce to take that trouble with himself would be helped by the belief that he would get well.

Dr. Ireland—Mr. President: I thank Dr. Moren for his paper, and think I have been benefitted by it. Of the tubes exhibited the soft one seems to be the most practicable. I do not think that a great deal of damage can be done to the stomach with these tubes. I have never used the method advocated by Dr. Guest. I have used normal salt solution by having the patient drink it. I use it warm, and if the patient takes enough it will wash out the stomach quite well. It is certainly more simple than the introduction of a tube. In my experience I have found it difficult to get the patients to use the tube.

Dr. Moren (closing the discussion)—Mr. President: I am a great advocate of washing the stomach. There is one condition in which I believe the washing of the stomach is necessary. That is when the stomach can not empty itself. Washing does good in these cases. In gastritis very few cases develop motor insufficiency where the stomach

can not empty itself. The tube does good by cleansing the stomach wall and getting rid of mucus. Contrary to the experience of Dr. Guest it increases peristalsis and helps to get rid of constipation. That is one of the valuable features of lavage.

Washing the stomach every day is bad practice. If the stomach can empty itself you do not need the tube.

In regard to Dr. Guest's plan of treatment I believe it is good. I believe if we could induce patients at home to drink as much water as they do when they visit the springs we would get similar results. The quantity of water that Dr. Guest's patient drinks does just as much good as washing out the stomach. Most people do not drink enough water. A great many of us only drink a few glasses of liquid in the twenty-four hours. No wonder there is so much suffering from constipation. Make them drink no less than five or six glasses, and it will do them as much good as the springs.

The first thing to do is to find out the condition of the secretion, find out the condition there, and find out what the stomach can do, and work accordingly. I remember I saw a case on Third street that was given up to die of cancer of the stomach. I went to see the patient, and gave her the test meal. I found an increased quantity of acid, with absence of mucus. She did not have cancer, and she did not have gastritis. I put her on a drug, cascara, at night, and she sings my praise. I limited her diet, and saw that it was properly digested, and saw that the bowels were emptied every day. I believe cascara is the best laxative we have.

REPORT OF CLINICAL CASES.

Dr. Dunn—Mr. President: I would like to exhibit the picture of a case of splenic leukemia. I do not wish to bore the members of the Society who heard the case reported at the county meeting. I would like to pass the picture around. It is a case of splenic leukemia treated with the X-ray. It is a photograph of the abdomen taken four weeks after she began treatment. I did not think the patient could recover when she first came to my office. I did not make a picture of the abdomen when the spleen was at its largest. This dark line shows the outline of the spleen after she had been under treatment four or five weeks. Dr. Kiefer remembers the size of the spleen. She came in December last, and has taken 129 treatments with hard tubes, which affect the deeper structures and not the surface. The blood count demonstrated 148 red to one white blood cell. At the time she came

to me for treatment there were 39 red to one white blood cell. You see there is quite a drop in the normal, yet I have had the patient on no medication at all. The color of the blood has not come up as it should. Since exhibiting her at the County Society I have given her Gude's Peptomangan, which was suggested to me at that time. I would like to hear from the members of the society on the case.

Dr. Kiefer—Mr. President: I am sorry I was not able to attend the last meeting of the County Society. I was detained by a case of labor at that time. I have a little synopsis of the case at home. If I had known it would come up to-night I would have brought it along with me. I treated the case, and was called to see her on various occasions. She never would allow me to examine her thoroughly. One time I went with the view of giving her a thorough examination, and it was eight months before I could get to examine her. At last her husband compelled her to allow me to make an examination, and I found out what her trouble was. To my surprise I found this enormous mass in the left side extending from the nipple to the left iliac fossa. The whole left side was occupied by this solid mass, and I told the patient that I thought it was an enlarged spleen. The abdomen was of enormous size. I put her on anti-malarial treatment with a view to reducing the size of the spleen, but it did no good. I called in consultation Dr. Sherrill who thought it might be a twisted pedicle or carcinoma of the spleen. We had her prepared to go to infirmary. A blood count was made by that time by Dr. Flexner, but he made no diagnosis in the case. Another blood count was made by Dr. Hays. He gave the diagnosis as leukemia, and, therefore, we did not do the operation.

Before that I had mentioned to her that I would like for her to take X-ray treatment. She said if it would do any good she was willing, and I then took her to Dr. Dunn. I had given her quinine internally and externally iron and arsenic, but they had no effect whatever.

Dr. W. A. Jenkins—Mr. President: I should like to ask Dr. Dunn a question. I would like to know, just from the standpoint of diagnosis, if in a case of splenic leukemia it is not readily ascertainable from the prevailing evidences of anemia? I would suppose that the loss of the normal red color would render a mistake of twisted pedicle almost impossible.

Dr. Guest—Mr. President: I believe that the only thing that has done this woman any good at all has been the X-ray treatment. I do not believe the other treatment has done any good at all. I saw a case

in New York City, in Dr. Janeway's clinic, almost identical with this one. The spleen was seventeen inches long and eight inches broad. White corpuscles 1 to 40. Dr. Janeway said nothing could be done for her. The X-ray treatment has been very satisfactory. I think it is the only treatment.

Dr. Dunn (closing the discussion)—Mr. President: This lady had lost her menstrual period from twelve to fourteen months before coming to me. It appeared after she had taken the X-ray treatment for three months. For the past five months it has been regular. The condition of marked anemia that Dr. Jenkins mentions was present. At the time she came to see me she was very anemic. It was impossible for her to sit in my office. I had to take her in at once, ahead of the other patients. She rapidly increased in strength and weight, and is now the picture of health.

Dr. Ireland—Mr. President: I wish to speak of the difficulty of reducing some fractures and of maintaining reduction. I was called to see a child of four and one-half years of age that had fallen down the steps and fractured the right arm. After giving an anesthetic I made a diagnosis of fracture of the corner end of the humerus just above the elbow joint. I made extension, and reduced the fracture as best I could. One thing that made apposition of the fragments especially difficult was a large hematoma that had formed at the flexure of the arm. I got the fragments in apposition, and put the arm up in angular splints of pasteboard at right angles.

I believe that in fractures of this kind the best position would be of flexions at an extreme angle, but on account of the hematoma and the swelling of the soft structures, we could not do it. I dressed the arm at right angles with pasteboard splints, held by gluten bandages. This morning I made a radiograph, and found that instead of the fragments being in apposition they were fully half an inch apart. The distal end of the humerus was half an inch from the proximal end. If the fragments were brought in position they would not remain there. The only thing to do was to give another anesthetic and reduce the fracture again. I put on a little different dressing from the first one. I took a plaster of Paris bandage three inches wide, and made a number of folds of that back and forth on the back of the arm long enough to reach from the hand to the shoulder, the idea being to make a mold of the arm. I dressed it in flexion a little more than a right angle, and put the pasteboard splints on the side to hold until the plaster hardened. The dressing can be kept tight by means of a roller

bandage. Where the arm is so large it will be necessary to change the dressing rather frequently. This is the easiest way to change the dressings, and one is not so apt to have a disturbance of the ends of the bone. I made another radiograph, but have not developed it yet to see whether we have the fragments in apposition.

These fractures are of interest because they are among the hardest to reduce, to hold in position, and to get good results in on account of the proximity of the joint. There is no evidence from the radiograph that the joint is involved. The fracture was on a line with or below the condyles. The elbow joint is probably the easiest joint in the body to get an ankylosis. It is deemed advisable that as soon as we can in these cases to change the dressing and use massage and some flexion, yet on account of the shortness of the distal end we will have to be very careful.

Dr. Dunn—Mr. President: I want to commend Dr. Ireland for making an X-ray examination to see whether the fragments were in their proper positions. This is essential about the elbow joint, as we have most of the trouble here following fracture. It is a difficult matter to keep from getting a stiff joint. I have a number of cases similar to the one the doctor mentions in my work with the X-ray, as I have made a number of examinations for other doctors, and I found several of these cases of epiphyseal separation rather than fractures, especially at that age, and they are very hard to retain in proper position. A little more difficulty is experienced in maintaining an epiphyseal separation in apposition than if we are dealing with a fracture. If we have a fracture so that the teeth of one fragment engage with the teeth of the other, it will be easier to retain in position than if we have an epiphyseal separation where the surfaces are smooth.

I believe I would dress the fracture in a little different manner from that described by the doctor. I believe the proper position to dress a fracture of that kind would be to place the biceps and triceps in a position of rest rather than making flexion, which places the triceps in complete extension. In that way you avoid the tension of the triceps muscle that you would have if you placed the arm at an acute angle. Otherwise, I wish to commend the doctor for his procedures.

Dr. Abell—Mr. President: I believe like Dr. Ireland that the best position is an acute flexed position, so that the hand is placed upon the opposite shoulder. The objection I would offer is that in maintaining the fragments in apposition it would interfere with the circulation so that swelling remains a much longer time than otherwise. I have a

case in which the fracture was sustained five weeks ago, and the swelling is still present at the elbow joint. But this swelling and infiltration, which is invariably present, persists in these cases from two to four weeks longer than in other cases.

I think Dr. Ireland is dealing with a separation of the epiphysis, in which case he should have perfect apposition. If the radiograph shows that the apposition is perfect, that is the position it should be in.

Dr. Ireland (closing the discussion)—Mr. President: In conclusion I would say that it is almost impossible to get this in perfect apposition and keep it there on account of the great amount of swelling and the shortness of the lower fragment, because it is just at the epiphyseal junction. I certainly believe most firmly that the only thing to do is to subject fractures of this nature to X-ray examination. It is exceedingly difficult, especially in fractures of this kind, to tell when the fragments are in apposition, and I don't believe anybody can tell without the use of the radiograph, and since results are so hard to obtain it is necessary that a radiograph should be taken of all these cases, and continued to be taken until the fragments are in apposition.

In putting on the dressing sometimes a slight movement is made and the fragments slip. After each dressing of a case a radiograph should be made.

PROCEEDINGS OF THE LOUISVILLE SOCIETY OF PHYSICIANS AND SURGEONS.

Paper by Dr. I. Lederman: "A Case of Abscess of the Brain, Following Acute Suppurative Otitis Media, with Remarks," under original articles, page 449.

DISCUSSION OF PAPER.

Dr. Irvin Abell: I am glad to have an opportunity of discussing the paper of Dr. Lederman, and shall do so from the standpoint of the general surgeon. Affections of the mastoid, with relation to the brain coverings, are analogous to those of the appendix with relation to the peritoneum. There are four conditions in the cranium which call for surgical attention: Abscess of the brain, pachy-meningitis, lepto-meningitis and thrombosis of the various sinuses.

Lepto meningitis, which is very fatal, corresponds to peritonitis, sometimes continuing for two or three weeks, and again lasting only a few days, as in a general suppurative peritonitis.

Referring to abscess itself the diagnosis is extremely difficult, and if operation is postponed until localizing symptoms are unmistakable chances of recovery are slim. Certain aphasic conditions point to an involvement of the areas governing these functions, though the appearance of the aphasia, while locating the abscess, will often set in too late to save life.

The extra-dural abscess is most generally met with in acute cases, the sub-dural in chronic ones.

An irregular temperature, slow pulse, mental wanderings, nausea and dizziness, in the absence of some well defined cause outside of the head, should be an indication for opening the cranium and asperating.

I should like to know what per cent. of cases can be opened by way of the ear, as it would seem to me that by following the bone necrosis you could get into the abscess cavity. If, after finding caries of bone, is it not justifiable to explore the brain?

Dr. Blitz: I visited the patient several times, but he showed no sign of a brain abscess. I have learned since that the patient had been going to parties and keeping irregular hours after the mastoid operation, which may have been a factor in lowering his vitality. The first symptom that he complained of was pain at the angle of the jaw, which he attributed to a wisdom tooth.

Dr. Robins: It occurs to me that an examination of the character of the infection would be useful towards the election of an antitoxin serum, which might be used with good results, especially in those cases where a localization is impossible.

Dr. Hoffman—I should like to ask if aphasia is not absent when the infection is in the temporal region, and on the right side, as we know the speech centers to be situated on the left.

Dr. Casper (visitor): I was closely associated with the patient, and he presented a most irregular line of symptoms.

Prior to the mastoid condition he had high fever for two weeks before developing measles. The middle ear trouble set in a day or two after the appearance of the eruption.

Another very interesting fact was developed upon the occasions of the administering of an anesthetic. The first time the anesthetic was easily given, the second time it was difficult, and the third time very difficult indeed, though a small amount of anesthetic is necessary when a patient is comatose.

No operation could have saved him, as localization was obscure. Pain was more or less constant over the supra-orbital region, for which

hypnotics were necessary ; later he complained of insomnia, though he might be sleeping all the time.

Dr. Lederman (closing) : The extra-dural abscess is the most common in mastoiditis, especially in very young children, the pus in these cases being very easily evacuated. Operating through the ear is an easy matter, as the brain cavity can be broken into without any difficulty.

In aspirating, if puncture is made at the base on a line corresponding to the antrum, the needle may be inserted an inch and a half in every direction except inwardly.

ORBITAL CELLULITIS WITH FRACTURE OF THE RIM OF THE ORBIT.

This boy was struck in the head with a brick, June 12th. The blow felled him to the ground, but did not render him unconscious. He was taken to the University Hospital, where sutures were taken in a wound extending along the entire upper margin of the orbit. I saw him the next day. The wound was an extensive one, the outer angle gaping so that a fracture of the rim of the orbit could be plainly seen. There was exophthalmos to a marked degree, both lids being greatly swollen and the eyeball fixed. A profuse discharge of pus bathed the wound continually. The patient complained of headache, he was stupid, and had a temperature of 102° . For three days the temperature ranged from $99\frac{1}{2}$ to $102\frac{1}{2}$; pulse 60 to 80. The pain continued. Operated June 16th. The wound was reopened, and the fragments of periosteum which were still adherent in shreds were separated. The loose bone was removed with forceps a piece about three-fourths of an inch in diameter coming away. This extended downward from the fronto-malar suture, and did not communicate with any of the adjacent cavities. With an elevator the periosteum was separated from the wall of the orbit as far as the apex. This liberated a quantity of pus. An incision was then made through the external rectus muscle into the muscle funnel, but no more pus was found. Sutures were taken in the upper two-thirds of the wound, a strip of gauze being inserted under them. Gauze was carried between the bone and periosteum back to the orbit, and also in the opening next to the eyeball. After the operation the temperature on one occasion rose to 103° , but gradually subsided, as did the other symptoms. The patient was discharged from the hospital July 1st, after the temperature had been normal for five days. Now the wound is entirely healed, the mutilation in the lid will disappear, and the cosmetic result will be good. The

ophthalmoscope demonstrates an atrophic nerve, and his vision is nil.

DISCUSSION.

Dr. Casper: I had the pleasure of seeing the patient when the operation was performed, and the results are certainly surprising, as at the time it seemed that there would surely be brain infection.

Dr. Richardson: I think it a mistake to drain scalp wounds.

Dr. Abell: The doctor is certainly to be congratulated on the results, and it emphasizes the necessity of doing these operations thoroughly.

The loss of sight is most interesting, and I should like the doctor to elucidate the cause, as in other nerves, when the pressure is removed, function is restored.

Dr. Lederman (closing): The point raised by Dr. Richardson does not hold in this case, as the scalp was not cut. It is curious, but nevertheless true, that pressure on the optic nerve will give rise to atrophy, which does not cease when the pressure is removed.

Dr. Blitz presented a patient before the Society, and gave the following history:

Female, colored, aged nine years, in good health, apparently. Three weeks ago what looked to be blebs or papules made their appearance, soon becoming vesicular, with attendant itching. Diagnosis—pemphigus.

DISCUSSION.

Dr. Bronner: The patient before us shows the simplest form of pemphigus, in which the large bleb stands out upon the skin. We see few of the violent forms. I saw one case of the foliaceous variety, the blebs breaking down, covering the whole body, the eyelids being affected also, with a low fever throughout. Classification is a matter of each author's individual choice. In another case I saw, the blebs in twenty-four hours became pustular and bloody, high fever, delirium and kidney complications, the patient dying from this malignant form from the resulting toxemia.

Dr. Meyers: I am inclined to doubt the statistics as quoted by Dr. Blitz as being only 183 cases out of 125,000.

Dr. Bizot: Seeing this case caused me to read up on the subject, and I can corroborate the statement of Dr. Blitz, as out of 125,000 cases of skin disease, Dr. Jackson met with only 183 cases of pemphigus vulgaris.

Quite a large classification is given, but it really resolves itself into the three forms—the simplex, foliaceus and vulgaris.

Dr. Robins: I agree entirely as to this being a simple form, one other case of which I had the pleasure of seeing with Dr. Bloom. This case before us seems to be running a mild course, and in all probability will be cured.

Dr. Barnett: I had three cases in one family running over a period of three months before cure took place.

Dr. Blitz (closing): This case differs from the usual run in that the child was well nourished. The acute cases are generally found in children, the chronic ones in adults.

Health Reports.

HEALTH IN MICHIGAN DURING JUNE, 1904.

Reports to the State Board of Health, by representative physicians in active general practice, in different parts of the State, show the diseases which caused the most sickness in Michigan during the month of June (five weeks ending July 2), 1904, as follows:

Number of reports received for this month, 396.

Diseases arranged in order of greatest prevalence in this month.	June, 1904	May, 1904	Per cent. of report of cases stating presence of disease Average for June 10 years—1894-1903
Rheumatism.....	59	57	61
Neuralgia.....	45	51	52
Bronchitis.....	34	39	41
Tonsilitis.....	34	39	37
Diarrhea.....	28	25	33
Consumption, pulmonary.....	28	28	25
Gonorrhea.....	27	27	..
Syphilis.....	24	19	..
Influenza.....	24	34	25
Inflammation of kidney.....	21	17	19
Measles.....	20	27	16
Cancer.....	16	13	..
Small-pox.....	11	13	3
Typhoid fever	9	12	5
		2	1
Pleuritis.....	10	14	14
Scarlet fever.....	9	13	10
Inflammation of bowels.....	8	8	10
Pneumonia.....	8	15	11

Intermittent fever	7	7	18
Cholera morbus.....	7	2	10
Erysipelas	5	7	11
Diphtheria.....	5	6	5
Dysentery	1	3	6
Whooping cough.....	4	1	8
Puerperal fever.....	3	2	2
Inflammation of brain.....	2	.6	2
Remittent fever.....	2	4	12
Cholera infantum.....	2	.3	6
Meningitis	2	.3	2
Membranous croup.....	.5	.6	.4

For the month of June, 1904, compared with the preceding month, syphilis, inflammation of the kidney, cancer, cholera morbus, dysentery, whooping cough, puerperal fever, inflammation of brain, cholera infantum and meningitis were more prevalent; and influenza, measles, typhoid fever, pleuritis, scarlet fever, pneumonia, erysipelas and remittent fever were less prevalent.

For the month of June, 1904, compared with the average for June in the ten years, 1894-1903, small-pox typhoid fever and puerperal fever were more than usually prevalent; and pleuritis, pneumonia, intermittent fever, cholera morbus, erysipelas, dysentery, whooping cough, remittent fever and cholera infantum were less than usually prevalent.

THE MOST DANGEROUS COMMUNICABLE DISEASES.

Including reports by regular observers and others, meningitis was reported present in Michigan during the month of June, 1904, at 9 places, whooping cough at 20 places, diphtheria at 61 places, pneumonia at 74 places, typhoid fever at 75 places, scarlet fever at 96 places, measles at 168 places small-pox at 178 places and consumption at 202 places.

Reports from all sources show meningitis reported present at 3 places more, whooping cough at the same number of places, diphtheria at 4 places less, pneumonia at 43 places less; typhoid fever at 4 places less, scarlet fever at 15 places less, measles at 10 places less, and consumption at 10 places more in the month of June, 1904, when compared with the preceding month.

LANSING, MICH., July 8, 1904.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÆ.*"

VOL. XXXVIII. LOUISVILLE, KY., AUGUST 15, 1904. No. 154.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. — *RUSKIN.*

Original Articles.

GENERAL SUPPURATIVE PERITONITIS OF STREPTOCOCCIS ORIGIN, WITH RECOVERY.

BY E. S. ALLEN, M.D.

It is due to the high mortality resulting from a streptococcic peritonitis that I feel warranted in reporting this case of general suppurative peritonitis of streptococci origin, with recovery. In nearly every case of general peritonitis the colon bacillus can be demonstrated in large quantities, and frequently it is the only germ that can be found by the microscopist, when in my mind rarely, if ever, is the colon bacillus the primary infecting agent. Some other bacteria either by accident has been introduced into the cavity, or through some pathological lesion of the endothelial lining of the cavity has been allowed to escape into the cavity. This virulent bacterium, one of the pyogenic variety, at once begins a very destructive assault on the endothelial cells; they are destroyed and exfoliated, the offal of the germ (a ptomain) is rapidly taken up by the lymphatics, and nature makes an attempt at eliminating the poison through the emunctories and excretory apparatus, while the blood cells are busy manufacturing an antitoxin, and if the infecting agent is not of a very virulent type, the infection is, so to speak, taken care of. But otherwise the toxins of the primary infecting agent so lowers the vitality of the endothelial cells forming the peritoneal covering of the intestine as to break down nature's barrier against the invasion of bacteria that are apt

within the intestinal tract, and that as soon as the vitality of the intestine at any point is interfered with they migrate with a marked rapidity through the intestinal wall into the peritoneal cavity, and find a suitable pabulum in the endothelial cell, whose resistance has been altered by the primary invading germ, and as the colon bacillus is a very vigorous organism, they, under these most favorable circumstances for their growth, multiply in enormous numbers, and have a tendency to intensify the inflammation that already existed, causing a very rapid exfoliation of cells and a liquifaction necrosis to take place, resulting in the formation of pus in large amounts.

In a very short time frequently the colon bacillus, being by far the most vigorous of the two organism, annihilates the pyogenic organism, and we find the colon bacillus in pure culture, when another bacteria is responsible for most of the injury done to the peritoneum.

The streptococcus is such a virulent bacteria, producing a ptomain that rapidly intoxicates the human organism, producing a clinical condition simulating shock, the patient frequently dying, and at the autopsy we find no macroscopical lesion, and when a microscopical examination is made, we often find the streptococcus in pure culture, and only in the most virulent type of peritonitis do we find the streptococcus existing unaccompanied by the colon bacillus, and then the patient is dead before the colon bacillus has time to get through the intestinal wall, and I think that if a few hours exist between the death of the patient and the autopsy that the colon bacillus will be found in the peritoneal cavity.

Report of the Case.—Wilber Hildebrand, white, male, age twenty-four, family and personal history good, with the exception that he had a brother who was operated on for appendicitis about three years ago; recovery complete.

June 10, 1904, the patient was seized with a griping pain in the region of the umbilicus, radiating all over the abdomen, and the patient, in his words, thought he had colic. After applying home remedies without relief, his family physician was sent for. Pain was controlled temporarily by the hypodermic. A calomel purge was ordered and followed with a saline. In a short while the pain in the abdomen began to be more severe. After eight or ten hours the bowels manifested no inclination to move, so high enemas were resorted to, with no result, patient constantly suffering pain, abdomen was distended. Pain was never localized, and patient was so very tender over the entire abdomen that it was impossible for attending physician

to determine whether or not the trouble was in the right iliac region. At the end of twenty-four hours patient's temperature was 103°, pulse 140, abdomen more distended, vomiting; hot turpentine stupes were applied, and a symptomatic treatment was kept up for twenty-four hours longer, condition constantly growing worse. Stercoraceous vomiting had set in, peristalsis had ceased in the small intestine.

A surgeon was called in. Intestinal obstruction was the condition thought to be existing at the present time with a general peritonitis, and appendicitis was agreed on as the most probable primary cause of the entire trouble.

The patient was sent to the infirmary and rapidly prepared for an operation. He went on the table with a pulse of 170 and temperature of 105°, and abdomen was terribly distended and painful, an incision was made in the median line from just above the symphysis pubes to the umbilicus. Upon entering the peritoneal cavity several ounces of a serous material flowed out, which was of a distinct fecal odor, the intestines were of a dark wine color, covered with a plastic material, but were not adherent. So virulent was the infection that all of nature's efforts to wall off or limit the inflammatory process had been futile; they were enormously distended with gas, and their vitality was so impaired that with the most careful handling they would, wherever touched even with an abdominal sponge, bleed freely. The distention, by impacting certain areas of the intestinal tract, had produced a complete obstruction, and at these areas of compression very recent adhesion had taken place.* The region of the appendix was investigated as the causative agent, and when the caput coli was raised up several ounces of fecal matter poured out into the peritoneal cavity. The appendix was seen adherent to the parietal peritoneum as a large necrotic mass, having sloughed off from the bowel entirely. An area of about a half inch square of the caput coli was gangrenous, and as fast as the iliac fossa was sponged out it would refill with the contents of the intestine. No attempt was made at removing the appendix, three large rubber drains put in and a large piece of plain gauze around each tube, and the abdomen was closed with silkworm gut sutures. The condition of the boy was anything but encouraging when he came off of the table. While on the table he received one quart of normal saline by hypodermoclysis, and when placed in bed was given two ounces of saline per rectum every three hours.

Twelve hours later he was holding his own; fecal vomiting present, with a great deal of biliary matter. Twenty-four hours—

Pulse 120, expression good. After forty-eight hours we felt hopeful, and the patient has made a rapid recovery. A fecal fistula existed for three weeks, which for the first four days following the operation discharged a large amount of fecal matter. At the end of a week all of the drainage tubes were removed except the one through which the fecal matter was passing. At present, four weeks after the operation, the fecal fistula has entirely closed, and the boy is well, with the exception of a small sinus where the last tube was, which is rapidly closing up.

I examined several slides of the fluid material and lymph material from the intestinal wall, and in both found the streptococcus and colon bacillus in large numbers.

It is a well established fact, says Kelly, that the streptococcus is the most virulent of the ordinary micro-organisms, and its introduction or escape into the peritoneal cavity is one of the most dangerous accidents that can occur in the course of an operation. In almost all cases of peritonitis the colon bacillus can be found in large quantities and frequently in pure culture, and is often put down as the cause of even a fatal case of peritonitis when it is only a secondary factor, for only under the most favorable condition is it capable of producing a peritonitis, and even this has been questioned. The growth of the bacillus is so vigorous that it would appear to kill the less resistant pyogenic cocci, which are consequently not found by the time the patient is operated on or on the autopsy table.

By permission of Dr. F. W. Samuel, and the attending physician, I report this case, which has been of unusual interest to me.

LOUISVILLE, KY.

MOUTH BREATHING.

BY M. F. COOMES, A.M., M.D., LL.D.

Professor of Physiology, Ophthalmology, Otology and Laryngology in the Kentucky School of Medicine; a Member of the American Medical Association, the Kentucky State Medical Society, and the Louisville Clinical Society; Ophthalmic Surgeon to the Louisville City Hospital and the Kentucky School of Medicine Hospital; Consulting Ophthalmic Surgeon to Sts. Mary and Elizabeth Hospital; Ophthalmic Surgeon to St. Anthony's Hospital, Etc.

No more important question can be considered than that the nose is intended to be the chief avenue through which air should be admitted to the lungs. The mouth should be used for respiratory purposes only in emergency.

The North American Indians, as a rule, observe the necessity of keeping their mouths shut, and to that end certain of the tribes take every precaution to keep the mouths of their infants closed.

Dr. Catlin, a distinguished surgeon of the United States army, made a special study of the habits of these children of the forest, and he was so much impressed with their habit of keeping their mouths shut and upon their insisting upon their children doing the same thing, that he published a little monograph some years ago, the title of which was, "Shut Your Mouth." This book detailed the facts in particular concerning the customs of the North American Indians in regard to keeping their mouths shut.

The civilized mothers can well afford to imitate their sisters of the forest in making their children keep their mouths shut, and if it be impossible for the child to do so they should investigate the causes of mouth breathing and have them removed.

Nothing is more unsightly than an open mouth in an adult, and nothing is more unsanitary in any person than to keep the mouth constantly open. It affords a ready avenue for the ingress of dirt, dust and germs of every description and kind; and since it is a well known fact that the germs of tuberculosis are air borne, it makes it doubly necessary that we should inhale through the nostrils, thereby reducing the danger of taking up the infectious germs to a minimum, as they would be much more liable to perish before reaching the lung by passing through the nose than by passing through the mouth.

Again, it is a fact that children are much more liable to contract diphtheria than adults, and I believe that the reason for this is that children, as a rule, keep open mouths, and take up these germs when adults would not be liable to the same danger by keeping their mouths closed.

As a means for preventing wrinkles in the face it is certain that the practice of keeping the mouth shut is one of the most positive. An open mouth results in wrinkles at the corners of the mouth and a general wrinkling about the lower portion of the face which is wholly unnatural, and to this end, if you would avoid a wrinkled face, keep your mouth shut except when talking or eating.

Mouth breathing is very largely a habit for which somebody is to blame.

If it be an adult, the individual is to blame; if it be a child, the mother and father or others that have special supervision over the child is to blame; it being understood in all of these cases that there is no

obstruction in the nose and that nasal respiration is possible and without discomfort, and that the mouth breathing is simply a habit which has resulted from carelessness or ignorance as to the importance of nose breathing. In the cases where nasal respiration is impossible then mouth breathing is a necessity, and investigation of the nose and pharynx is demanded, and if obstructions are found they should be removed sufficiently to enable the patient to breathe through the nose comfortably. One of the most common nasal obstructions is the relaxation of the membrane covering the turbinated bodies. You also frequently find this membrane in a hypertrophic condition, but in a great majority of nasal obstructions it will be found due to simple relaxation of the membrane covering the inferior turbinated bones. This relaxation is not found persistent day in and day out, but is more persistently so in the night than in the day. At night the recumbent position, with the influences of gravity, makes this membrane much more liable to become relaxed and engorged, when the tissues become erected as the result of position, or the change of atmosphere. The nasal breathing is always more difficult in a close, warm room than with a moderate temperature.

Where there is a genuine hypertrophy, the tissue refusing to shrink up to any great degree under the influence of adrenaline, then it will be necessary to remove a sufficient amount of the tissue to give good breathing space. Where there is simple relaxation and the tissues blanch out readily under the influence of adrenaline, then superficial cauterization with the electric wire will be sufficient to contract the tissues enough to give good breathing space. The deep burning is unnecessary and painful, and produces cicatricial tissue which often leads to very great discomfort, because the secreting surface has been destroyed, and inspissated mucus and other debris will accumulate on the scar surface, and in that way make it unpleasant to the patient and sometimes produces ozena. The patient should be kept under observation for quite awhile, and if the shrinkage is not sufficient after ten days or two weeks the burning may be repeated again, and even three or four times if necessary, at intervals of ten days or two weeks. Where you have such obstructions as spurs of bone, deviated septums and polyps, these things should be removed.

Last, and by no means least, comes the obstruction due to adenoid vegetations or growths in the nasal-pharynx. Aside from the eruptive diseases nothing is a more fruitful source of inflammations of the eustachian tube and middle ear than adenoids in the pharynx.

Dr. Braden Kyle, in his excellent work just published, says in at least 90 per cent. of cases of adenoid vegetation there is involvement of the eustachian tube, with deafness in a varying degree.

The writer's experience, and that of almost every other critical observer, can bear testimony to the truthfulness of the statement made by Dr. Kyle concerning the presence of adenoids in the pharynx. In addition to the involvement of the ear the defective respiration, that is, mouth breathing, is accountable for many of the ailments of childhood. The imperfect condition in which the air enters the lungs makes them ill thriven, and they become round shouldered and dwarfish in their general make up, and are usually bad sleepers, and are anemic and unable to stand the ordinary amount of fatigue that children in moderate or in good health should bear. As before stated, I think there can be no doubt but what this mouth breathing is accountable for many children being tuberculous, because, with their open mouths and their low stature, they are in an atmosphere more liable to contain the germs of tuberculosis than the adult, whose breathing apparatus is two and one-half to three feet above that of the ordinary child.

Nearly all of the cases of so-called nasal catarrh met with in the child and those in adults are nothing more nor less than cases of obstructed post nasal spaces. With this understanding of the pathological condition, the method of treating all of these cases is very readily understood. The thing to do is to free the post nasal spaces from adenoids or any other obstructions that may exist.

If the obstruction is due to the presence of adenoids this is readily done by curettage, which is not painful, and which may be done under ordinary anesthesia produced by cocaine. Just here I wish to enter my earnest protest against the use of a general anesthesia of any kind in the removal of adenoids from the post nasal space from children or adults. First, and most important, the operation is not painful if the parts are put under the influence of cocaine. Second, there is a great deal of time saved by the non-use of a general anesthesia. Lastly, but not least, the general anesthesia has its dangers and is troublesome, and sometimes very ugly results follow its use, and the operation is not of sufficient gravity to demand this course, and for that reason I do not feel that we are warranted in giving a general anesthetic for the purpose of removing adenoids.

Of course, children will make a great fuss under any circumstances, and I invariably say to the parent or those interested in the child that they will make a fuss anyway. During my whole professional career

I have never given a general anesthetic for removing adenoids from the pharynx of a child or any person. After the curetting has been performed it is well to spray the nose out four or five times a day with normal saline solution, containing from five to fifteen drops of carbolic acid to the ounce. The child may also use a gargle of the same material or any other antiseptic solution that is convenient.

In a few days the child has fully recovered from the effects of the curettage, and in a short time will breathe through its nose if that organ be in condition, and in nearly every instance there will be a great improvement in the general health after curetting the pharynx. It is also well to give them an iron tonic of some kind or other so as to start them on the up grade, and if they are much debilitated an emulsion of cod liver oil will often prove very beneficial to them. It is a rare thing that any of these children will need the attention of a specialist for more than a week. I frequently curett them and send them back to their homes in the country, and never see them again. I have almost invariably had excellent results to follow this plan

If other forms of obstruction exist in the nose or pharynx, they should be removed so as to make nasal respiration possible.

Selections.

THE ANTI-BACTERIAL SECRETIONS OF THE BRONCHIAL TUBES—PRELIMINARY WORK.

BY DANIEL S. NEUMAN, M.D.

Denver, Col.

THE PHILOSOPHY OF NATURAL SELF-PROTECTION.

The energy of animal life is expended either in making war or resisting it. "Offense and defense are sciences which the inferior creatures can not neglect." In life there is no cessation of hostility. The warfare of the internal organs armed with antidotes against the introduction of outside poisons and bacteria, aided at the same time by swift currents of secretion to sweep away micro-organism by the law of gravitation, never ceases.

In all bodies, both animal and vegetable, there is a perfect system of self-protection. In animals the nose secretes a fluid which contains potassium sulphocyanide, besides other substances which have not yet been perfectly separated, and which form a strong antiseptic fluid. Tears possess bacterial properties. The characteristic fluid produced by one gland or set of glands is never reproduced by another. The blood itself is not only the great nutritive fluid of the body, but carries different ingredients to different glands, from which each gland individually extracts the particles necessary in its normal functions. "Even in the process of elimination of foreign bodies the organs possess a power of selecting different substances; for instance, sugar and potassium ferri-cyanide are eliminated by the kidneys, the salts of iron by the gastric tubules and iodine by the salivary glands."

"The mammary glands are among the most remarkable organs in the economy, not only on account of the peculiar character of their secretion, which is unlike the product of any of the other glands, but from the great changes which they undergo both in size and structure." "The formation in the liver and muscles of glycogen from dextrose, and the reverse change, are among the most important. Experiments

1. Gossée, the Microscope.
2. Flint, Physiology.

on animals and autopsies on the human body seem to prove that the pancreas furnishes the blood or lymph with an internal secretion necessary either to the normal consumption of sugar in the body or to the control of the sugar output from the liver and muscles. The function of the thyroid appears to be connected with metabolism, and when the glands are extirpated or atrophied the subject becomes affected with myxedema and succumbs. The essential secretion of the thyroid is thyroidalbumin, from which thyroidin is obtained. Supraenal extract is a true internal secretion, and is a most powerful vascular tonic."² The sphincter muscles form a good defense to the different cavities of the body.³

The fluids of the stomach and the intestines are so well and thoroughly known that I do not consider it necessary to describe them.

The epithelium of the bile passages and the liver tissues are decidedly resistant to the invasion of various micro-organisms.⁴

To sustain the theory of natural self-protection, I will introduce some examples, not only from animal, but also from vegetable life. For instance, a peachstone contains hydrocyanic acid in large quantities, undoubtedly to protect it from the attacks of worms and insects. Even certain flowers (wax plant) have been known for ages to give out odors which render them dangerous to life and make them fungi-proof. During the time that the constructive work of plants goes on there proceeds also a work of disintegration. In the economy of the organism life and death go hand in hand. The alkaloids, resins and volatile oils are waste products, so far at least as nutritious purposes are concerned; however, they are of the greatest use by offering some protection against animals and destructive fungi.¹ It is well known also that the potato tuber, when left to grow exposed to the full sunlight, develops a poisonous principle, solanin, but when the potato is grown normally, *i. e.*, under ground, it is not present except in a very minute quantity in the skin. This process of destructive change is apparently supplied by nature as self-protection from destruction. The leaves of the pitcher plant and Venus-fly plant entrap insects, and destroy them by secretory fluids.

Bees and wasps have for self-protection an apparatus supplied with secretory glands for preparing and injecting a powerful poison in time of need.

2. Text Book of Chemistry, E. C. Hill.

3. Meltzer.

4. S. Taima.

1. Bastin, Botany.

Healthy pigeons' blood has a great bactericidal power, unaffected by previous bleeding of the animal. This power is exercised not only on bacilli, but also on spores.

The rattlesnake would be practically defenseless had not nature supplied it with a deadly poison, which is manufactured in its own body.

The tarantula not only manufactures a deadly poison, but also has an anti-serum produced in its gland, used by the Russians as an antidote.

Take even the defenseless rabbit; nature has so adapted it to its environments by evolution that in summer its fur is grayish brown to match stones, earth and dried grass, and in winter it is white as the surrounding snow. The gall-fly pierces the part of a plant which it selects, and injects into the cavity a drop of its corroding liquid and immediately lays an egg or more there. The circulation of the sap is thus interrupted and thrown by the poison into fermentation.¹ M. Virey says: "The gall tubercle is produced by irritation in the same way as inflammatory tumor in an animated body, by the swelling of the cellular tissue and the flow of liquid matter." In reality, the mechanism of production of the gall tubercle is only secondary, due to the secretion of the antidote against gall-fly poison.

Doderlein isolated from the vaginal secretions the vagina bacilli, and regards them as one of the chief defenses of the genital tract against bacterial invasion from without.

PROTECTION BY IMMUNITY.

Immunity may be classified as follows:

1. Natural immunity.

2. Acquired immunity : { by heredity.
by disease.
by accident. Temporary.

3. Artificial immunity.

Some individuals possess immunity in a marked degree, while others exhibit only a very feeble resistance to bacterial organisms. Immunity is never general; it confers protection against all contagious or infectious diseases, but it is always special according to the diseases rendering a person perfectly invulnerable to one or the other.²

Many animals are less susceptible to infection than others. Some

1. *Riforma Medica*, Naples.

2. Gossée.

1. Dr. H. B. Weaver.

species of animals are naturally immune to certain infectious diseases ; they even resist artificial infection.

A good illustration is as follows :

Infusoria and yeast fungi possess a complete immunity from tetanus and diphtheria toxins. ²The rabbit possesses a marked resistance to tuberculosis. "Buffaloes are not susceptible to experimental infection." I might as well mention the natural age immunity from chicken-pox, measles, whooping-cough, etc. White men are naturally immune to bubonic plague in comparison to the Mongolians.¹

Natural immunity is either due to the perfect physiological condition of the body, with its normal secretions and chemical reactions, or to the resisting power of the system developed by evolution.

Immunity acquired by heredity : Occasionally a person will be found in whose family a certain common infectious disease has not occurred for a generation, although the members of each generation passed through one or more epidemics of that particular disease, and took no special precaution to escape it.² Negroes and mulattoes enjoy an immunity from certain tropical diseases.³ Immunity from the paternal side is not as readily transferred as from the maternal side.⁴ Vaccinal immunity is sometimes transferred through the placenta.⁵ It might be transferred during the nursing period through the milk of the mother.

Climatic immunity : Persons who have lived all their lives in a yellow fever region are less apt to contract yellow fever, and when they contract it the disease usually manifests itself in a milder form than it would in a newcomer.⁶

Immunity acquired by disease : The attack of certain diseases confers protection from a subsequent attack of the same disease or an attack by modification of one disease confers immunity from the original source of modification.

Dr. Lake, from a study among a tribe of Indians, came to the conclusion that Indians who have suffered from scrofula in childhood became immune to tuberculosis in after life.

Scrofula by itself is modified tubercular disease by involution of the bacteria, which might be due, taking into consideration that

2. Dr. Gengon.

1. Dr. Prattner.

2. Dr. Wm. J. Class.

3. Dr. W. C. Wells.

4. Dr. O. Lambert Ott.

5. Dr. Beclere Benard.

6. Dr. Wm. J. Class.

bacteria is acid proof, to the alkalinity of the secretions which destroy by neutralization the waxy-fatty capsules and render them less virulent and severe.

Nature cures typhoid fever by the action of anti-bacterial agents acting upon the specific bacilli. These agents are found in the body cells, the blood and lymphatic apparatuses.

Immunity acquired by accident : Sometimes immunity to a certain disease may be produced by the development of antitoxins in the body through the agency of infected food.

Acquired immunity is due to the presence in the body of the specific microbe of some disease in a form sufficiently benign to be tolerated by the host, yet sufficiently active to stimulate the production of the antitoxins.² Sometimes it is due to the reaction between the tissues of the invading body and the enzymes of the host. In some instances the germs undergo modification before their entrance into the body, and become less active by involution and modification of their strictures in accordance with the surrounding circumstances, as climate, temperature, etc.

It may be due to transformation of the biological functions of the organisms.

Artificial immunity is due to vaccination, antitoxin serums and accidental inoculations.

Emerich and Low's theory refers to the resisting power produced by soluble chemical substances of the nature of bacteriological enzymes.

Ehrlich's lateral chain theory leads us to the conclusion that immunity depends upon the chemical combination of toxin with antitoxin ; for instance, that during neutralization of the toxin by antitoxin one molecule of the latter combines with a definite quantity of toxin, forming a double salt.

Temporary immunity is due to the development of antitoxin for a short period, usually a few weeks.

Nuttall first demonstrated the antiseptic properties of the blood serum.

The activity of the serum alone against bacteria, according to Buchner, is greater than when the cellular elements of the blood are present.

Schloger's chemico-cellular theory is that in all animal cells there

1. Dr. Richardson.

2. Dr. Carlton E. Sudo.

exists certain antiseptic properties which are increased by the bacterial attacks.

Vaughan claims that the most important protective germicidal agents possessed by the body are the nuclei.

Meltzer believes that the defense of the body against hostile germs is not due to a single tissue or a single function, but to the concentrated action of the independent factors.

LOSS OF RESISTING POWER OF SYSTEM AND AFFINITIES.

Castration both in male and female animals lessens the resistance against infection.¹

Temperament bears an indirect connection to the resistibility of infection. The state of the general health appears to be connected with the susceptibility to infection.

“Experiments with tetanus and anthrax show that animals treated with alcohol after they have been vaccinated lose their immunity. If treated with alcohol during vaccination they acquire immunity with difficulty. If vaccination was begun after the treat with alcohol, it was only successful if the latter was stopped at the beginning of the vaccination.” In the case of anthrax it was impossible to immunize animals while they were being treated with alcohol.²

Certain cells of the body have a minimum resistance against certain poisons, which is manifested in the case of tetanus poison by a special affinity for the nervous system.³

Indians are very susceptible to tuberculosis.

Some certain diseases, as pneumonia and erysipelas, have the tendency, as after effects, to leave the patient more susceptible to all infectious diseases.

Immunity acquired in one country against specific infectious diseases might be lost by the climate of another.

The principle of phagocytosis is that the wandering cells of the animal organism (the leukocytes), possess the property of taking up, rendering inert and digesting micro-organisms which they encounter in the blood and other tissues.

Rauschenbach demonstrates that when in the process of coagulation fibrin was formed, it was not as a specific product of the action of the colorless elements of the blood alone, but also as a result of the

1. Dr. Sirleo.

2. Dr. Deleorde.

3. Dr. Deleorde.

combined action between all animal protoplasm and healthy blood-plasma, and there was always a disintegration of the leukocytes present.

Hankin and Martin isolated from the spleen and lymphatic glands a globulin body, which in solution possessed germicidal properties. Ogota isolated from the blood ferments like globulin.

After long efforts I have succeeded in isolating the enzyme of the racemose glands of the bronchial tubes. The method I employ in separating the same is as follows :

I carefully separate the glands and the lining of the bronchial tubes, cut the glands into the smallest possible particles and then put these into a vessel containing equal parts of water and glycerin, after which I subject the same to a temperature of from 35° to 40° C. for six to seven hours. I then filter the same, after which I add some hydrochloric acid, and precipitate with alcohol and hydrate of sodium.

As far as my experience shows, this ferment has a slight anti-bacterial action, and has a tendency to dissolve colonies of tubercle bacilli in culture in from six to ten hours.—*Denver Medical Times.*

REMARKS ON MANAGEMENT OF CLUB-FOOT, INCLUDING REFERENCE TO THE SO-CALLED LORENZ OPERATION FOR CLUB FOOT.

BY BURR MINTON MOSIER.

Surgeon in Chief, St. Giles' Hospital for Crippled Children.

Since the delightfully memorable visit of the wonderful Dr. Lorenz, much has been written and more said relative to the Lorenz operation, though a better name is "The Bloodless (?) Operation for Reduction of Congenital Dislocation of Hip," but points relative to this operation, be they good or bad, I do not offer for your discussion to-night, but in passing this interesting subject I beg to say that there seems to me even yet many unsettled and disputable opinions both as to the operation itself and the results obtained.

It will take much time before this wonderful procedure will have been dropped into its appropriate niche, there to fulfil and maintain its proper position among the future surgical operations.

As I said before, not this hip operation but another, sometimes bearing Dr. Lorenz's name. do I wish to bring up for discussion this evening, namely, the foot-modeling operation for club-foot, though I doubt if he can lay the same claim to this foot operation that he does to the hip operation, for it is not in any sense new, as it has for many years been performed under various names similar to or meaning forcible correction, by Koernig, Wolf and many others, and as it always has it always will, in a degree at least, be a part of the successful treatment of every case of club-foot. I do not wish to be understood as advocating this operation alone as the only treatment in all cases of talipes, yet it includes the essential surgical principles that any operation for this deformity may lay claim to, be it in the massage employed in the very mild cases or in the severe operations used in the extreme cases. The idea of overcoming perverted resistance and maintaining that power is ever paramount in this form of surgical technique. So the essential principles involved in this operation are those upheld by any successful club-foot operation, varying only in the matter of the degree of force which each individual case makes it necessary to employ.

Now, for a moment, let us superficially consider the structure and conditions in the normal and deformed foot; then let us apply the principles of this operation and see how well or how poorly it meets the indications.

When once established, the normal proximations of the foot are maintained by ligaments, fascias, etc., while the relations are controlled by the various joints and the muscular forces transmitted through the many tendons, acting like the guy ropes to the derrick. This control is interfered with by both external and internal influences, such as faulty foot-wear and posture, or any tissue derangement that might interfere with the normal form and functional activity of the foot.

In club-foot we have a foot existing under abnormal relation to other parts of the body, but more important is the abnormal relations of the different parts of the foot to one another, and it matters little the form or kind of talipes we always find deformity in the bones, muscles, tendons, fascia, as well as abnormal nerve and blood supply, and changed myodynamics showing a deformed sum and total, a foot with modified, perverted and limited function, and all of these abnormal conditions usually increasing.

Now the object of the treatment of talipes is to restore the form and function at the earliest possible moment, and I know of no surgical condition where it is more essential to choose the proper operation best suited to the particular case, yet surgeons very often obtain the same results by employing the different methods which they are most familiar with, but given the following conditions:

A surgeon with manual dexterity, and hand and arm strength, who is clever in the use of plaster of Paris.

A moderate degree of deformity.

Young child.

Normal club-foot resistance.

Case accessible for frequent observation and treatment.

Intelligent parents who are willing to co-operate.

A moderately long foot.

—and this foot-modeling operation is the operation *par excellant*, and when intelligently and thoroughly employed should and will yield very satisfactory results, and give little loss of tissue and usually no scar.

The description of it, as I understand it, is something like this: By the use of the hands, and, if necessary, levers (tenotomy sometimes) and a most essential accessory, the oval-cornered triangular fulcrum, the tissues are unfolded, stretched, molded, remodeled, torn, lacerated, etc., and when made pliable and the foot very flabby and easily over-corrected, the foot *while in an over-corrected position*, is padded with sheet wadding, etc., and plaster of Paris applied, and the sole part of the cast molded flat like the sole of a boot (always being

sure the circulation in the toes is perfect), and let this splint be worn for a long time.

An *ideal operation* for club-foot is one that renders the deformity resistless and minimizes the tendency to recurrence, and when the foot is made pliable it can be over-corrected, and it is more important to maintain the foot in its over-corrected position, having ever in mind that tendency to recur. In plaster of Paris we have an ideal retaining splint, and it does its work as such in orthopedics in a very satisfactory manner. And in the treatment of club-foot it can be satisfactorily used in retaining the foot in its over-corrected position after surgical methods have been employed, but if plaster of Paris be expected to give results in this deformity (other than a maintaining force), its possibilities are over-estimated and disappointment will surely follow.

When the deformity is not maintained by the plaster of Paris, an anesthetic should be given, and the reposition of the foot repeated and again kept in the over-corrected position, and the child encouraged to walk at the earliest date. The results will, of course, be delayed from one to many years and the number of forcible corrections necessary will be from one to many, but this over-correction must be maintained until the deformity shows no tendency to recur for one year, and then I think a cure may be claimed.

These operations of forcible correction and foot-modeling are in all cases the first to be considered, though the others, more severe, are often necessary. But if you think of these operations a few moments and compare their possibilities with the surgical indications for the cure of club-foot, I feel sure you will agree with me that the operation, "forcible correction," including the foot-modeling operation, is the usual and sufficient means for the management and cure of the ordinary cases of talipes equino varus.—*Brooklyn Medical Journal*, July, 1904.

Progress of Medical and Surgical Science.

Treatment of Gonorrhea.—Byford, in *American Medicine* of July 30, 1904, sums up a few but able remarks in regard to the treatment of gonorrhea. He believes that in male urethritis it is important to institute treatment early to prevent complications, and to this end also advises compressing the urethra near the pelvic bones to prevent the injection from going backward too far. He deplures astringents, and is very lenient in the use of silver salts, while he believes the irritating ones the most effective. He likes copious hot water irrigations and numerous injections, and likes plain water, as it can be used hotter and more copiously. In the female he use hot Sitz baths several times daily, and does not use urethral injections, as a female urethritis recovers satisfactorily without same. He follows the hot Sitz bath by a hot vaginal douche and with the patient in the dorsal recumbent position inject one ounce of a saturated solution of succinic dioxid, and retained as long as possible. The above treatment, when used early, has many advantages, which Dr. Byford sums up as follows:

1. It prevents the spread of the disease to adjacent parts.
2. It does not injure the epithelial covering, and thus it tends to limit the infection to the superficial areas.
3. It removes more germs and pus cells than either astringents or disinfectants can destroy. It acts in the same way as constant irrigation both in aborting and arresting the progress of the infection.
4. It can be used more frequently than astringents or strong germicides, so that the parts can practically be kept free of pus and germs all of the time, while the method of using germicides or astringents three or four times daily allows the germs and pus to accumulate and spread between injections.
5. In the male and possibly in the female, hydrogen dioxid injections may be substituted when the time and facilities for the hot water treatment can not be had. When the discharge has become scanty and the injections can not readily be used so frequently, a non-irritating solution of a silver salt can follow each hot water or hydrogen dioxid treatment.
6. It may be used in connection with succinic dioxid injections

for the dissolving of germs and culture material not eliminated by the douches.

7. It possesses all of the advantages of the expectant treatment, viz., it does no harm. It can be combined with the internal or local medication when it becomes impossible to carry it out with the necessary time consuming detail. It exemplifies the superiority of asepsis to anti-sepsis.

Gangrene of the Fingers Caused by Carbolic Acid.—By George Erety Shoemaker, M.D., of Philadelphia. Sufficient attention has not been given to the dangers of producing gangrene by the use of carbolic acid, even when comparatively weak, applied as a moist dressing for a number of hours. Notwithstanding the occasional report of cases, this danger is not widely recognized, and many physicians have not had their attention attracted to the subject at all. It is with the further hope of attracting notice to the matter that this communication is made.

The matter has been worked out experimentally, and it is now well known that the use of the full strength of the acid is not necessary to produce gangrene. When full strength acid is applied the parts turn white, and a superficial slough is cast off. Such white cauterized areas are sometimes seen in the vagina, when a carbolic acid douche has been extemporaneously prepared. Globules of the undiluted acid remain in the water and may be left in the vagina, cauterizing any part with which they may come in contact. I have frequently seen superficial erosions caused in this way, but never extensive gangrene. In the case of a finger, if dilute solutions are used, it seems to be necessary for the production of gangrene that the entire finger be surrounded by the solution, and tied up in it for at least twenty-four hours.

In an excellent review of the subject by Francis B. Harrington, Visiting Surgeon at the Massachusetts General Hospital, he shows that the effect is painlessly produced by a dressing kept moist for about twenty-four hours, and that the strength employed may be from 1 per cent. to 5 per cent. Experiments show that the result is not due to tight bandaging, that the dilute solution is quite capable of producing the effect, and that gangrene does not always follow the application. Josef Levai, of Budapest, quoted by Harrington, showed experimentally that the death of the part was due to chemic action, and that other dilute chemicals might produce the same effect if applied in moist dressings for twenty-four hours. It may be assumed that the reason

for the more frequent occurrence of carbolic gangrene is that this is the agent that occurs to the minds of the laity, of the drug clerks, or some physicians, for use as an antiseptic. The fact that the same individual may be in the habit of using the same solution without accident does not militate against the fact of the danger, since the same solution does not always produce the same results. Especially in dermatology and minor surgery is precaution necessary, and the knowledge of the danger should be much more widespread than it is.

Musk a Natural and Non-Specific Antitoxin.—*Charlotte Medical Journal*, July, 1904. (Crookshank.) It appears that musk is of benefit in many cases of acute infection, especially in those cases where death seems pre-eminent from a depressed condition of the medulla oblongata, due to the specific action of the toxins on this portion of the cord.

There are conditions of depression, the result of an infectious condition, where musk is of benefit, such as diphtheria in those cases where the antitoxin has been of no use, and types of pneumonia, and in typhoid fever with perforation, and in the septic kinds of scarlet fever, but the writer believes it is of untold benefit in cases of specific toxemia, where the toxin is manifesting itself on the nervous system. The writer says that it is difficult to explain the therapeutic action of musk, since its chemical formula is not known, but says that the aromatic odor is no doubt its active principle, and has, when conveyed by the blood stream, an action on the nerve cells of the lower brain either directly stimulant or an antagonistic action to the toxins of the bacteria, either fixing or rendering them inert, acting as a natural non-specific anti-toxin.

A New Use for Urea.—*The Monthly Cyclopedia of Medicine*, July, 1904, says that Dr. William Ramsden has found a field for urea hitherto unsuspected. It seems that it has the property of rendering albumin, the albuminoids, gelatin, etc., completely soluble.

Meat submitted to its action falls into shreds and becomes completely transparent. An entire frog in a solution of urea quickly becomes transparent, and if the solution is agitated a little, it is dissolved, forming a homogeneous mixture with the fluid. A worm in the course of twenty-four hours was decomposed, a part of it quite liquified.

Attempts to utilize the substance in botanical microscopy was but slightly encouraging.

The Treatment of Nocturnal Incontinence of Urine.—By Samuel Stalberg, of Philadelphia. (*New York Medical Journal*, July 9, 1904.)

The treatment should begin with the attention to any local or general condition which may act as a cause of the disease or help to aggravate it, for the disease may be either the result of a neurosis or be the result of trouble in the nervous mechanism of the bladder, but such things as seat worms, adherent prepuce, anemia and many others known to the profession act as irritants or as stimulants to that reflex action.

For the phimosis, stretching the foreskin or circumcision should be performed, preputial adhesions should be broken up, ascarides or oxyurides should be treated by santonine and calomel, etc. The vulva in girls should be looked after, and see that no irritation exists, constipation should be met with some kind of mild laxatives, and in every case the urine should be examined, and if found to be acid, should be met by giving plenty of water in the fore part of the day, and alkaline drugs, such as liquor potassa, three to five drops, three times a day, or the following :

℞ Potassium citrate, $\frac{1}{2}$ ounce,
Spirits of nitrous ether, 3 fluid drachms,
Water enough to make 4 fluid ounces.

M. Sig: A dessert spoonful in water every three hours.

For the anemia syrup iodide of iron in five drop doses, or the following pill three times a day :

℞ Iron carbonate, 30 grs.,
Ext. nux vomica, 2 grs.,
Ext. gentian, 7 grs.

M. Divide in thirty pills.

Cases of malnutrition should be treated by the administration of strychnine, while those cases (and they are in the majority) where no cause can be found should be treated by cutting out the sweets, limiting the water that the child has in the afternoon, simple diet, elevation of the foot of the bed, etc., and the use of the following :

℞ Atropine sulphate, 1 grain,
Water, 1 ounce.

M. Sig: Two drops at 4, 7 and 10 P. M., for a child five years old, increase a drop each day until the child takes five drops three times a day, and if after a few weeks, say three or four, the trouble still continues, combine strychnine, 1-200 of a grain, to a child five years old.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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Editorial.

We have watched with interest the many articles which have appeared from time to time in regard to the home treatment of tuberculosis. One of the first to call attention to what could be done with the tubercular stay-at-homes was Willis, of Vine Grove, a number of years ago, who believed that many could be cured, a still larger number benefitted, by being treated at home. At the present time men all over the country are writing and commenting on what can be done for this class of unfortunates.

As a matter of fact, we know that in at least two-thirds of the cases of pulmonary tuberculosis that recovery ensues, for statistics show that only 12 per cent. die of the disease, and autopsies show that in 25 per cent. of cases recovery has taken place. In the writing and discussion of the stay-at-home cases, too little is often thought of the well ones of the afflicted family, our attention being directed only to the welfare of the sick, and here we make a serious mistake, for the sanitary surroundings of the well must be looked to, not only for their

protection against the disease, which is, of course, the main object in view, but to render the surroundings such that the sick member may be made more comfortable thereby. To do this many things need to be done that will require the attention of the family physician; he should direct the cleansing of the cuspidors, the sterilizing of the clothing worn by the patient, as well as to see that the patient, if a man, wears no beard, for in this he harbors bacilli that may become disseminated; and, in fact, see that everything that comes in contact with the patient is sterilized before it is allowed to remain in the room for the well ones to handle, and by so doing the well ones are protected from this dreadful malady.

See that the patient sleeps in an open room, breathes plenty of fresh air, eats lot of wholesome food, and with the aid of the tonics at our disposal many of these cases will get well and live for years. But the main thing is to look to the care of the case to prevent the spread of the disease, sterilizing or destroying everything that becomes infected.

Book Reviews.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, etc., by Leading Members of the Medical Profession. Edited by A. O. J. Kelly, A. M., M. D., Vol. IV. Thirteenth Series, 1904. Philadelphia: J. B. Lippincott Co.

The present volume contains so many interesting articles that one would like to consider them *in extenso*, but space will not permit. Under treatment ulcer of stomach (Tyson), pneumonia infection (Musser), chronic bronchitis (Clayton), mercurial injections in syphilis are altogether satisfactory, despite the limited space allotted for the considerations of these important subjects. In medicine Sir Dyce Duckworth presents a clear, common sense article on the "Importance of Physiognomical Diagnosis." A very practical paper on "Tropical Dysentery," by Duncan, leaves nothing to be desired on this subject. Satterthwaite continues his work on the heart and circulation, considering in this article, "Palpitation, Abnormal Rythm and the Frequent Pulse." An earnest endeavor of Paynton to show the "Parallellism Between the Clinical Symptoms and Pathological Lesions in Rheumatic Fever" has resulted in a very interesting paper, and while we do not indorse all his statements or accept his conclusions as final, we admit that he has dealt with the subject in earnest, and in no half-hearted manner. Favill and Bishop write on "The Kidney," Burnett considers "Angio-Neurotic Edema," and "Syphilitic Aortitis" receives attention from Puble.

The mention of the names of Keen and Da Costa, Senn, Alborran, Battle and Corners, Coomes and Dugan is a sufficient guarantee of the work done in surgery. Some of the conditions are rare, and others have but recently received the careful condition due their importance. Many valuable points on treatment will be found by a careful perusal of these contributions. In gynecology and obstetrics, four papers by Davenport Wiggin, Pinard and Frank claim attention.

James has an article on "Hemiplegia in the Old and Young." Brower writes on "Right-sided Hemiplegia without Aphosia," and discusses multiple sclerosis, delirium tremens and tabes dorsalis.

In orthopedics there is but one article by Porter on "Congenital Dislocation of the Hip; Infantile Cerebral Paralysis and Congenital Club Foot."

In ophthalmology. Wood on "The Preparation of the Patient for Cataract Extraction," and Valude on "The Diagnosis and Treatment of Acute Glucoma" are of interest to the specialist.

The last article, "The Present State of Our Knowledge of Immunity," by McFarland, will probably interest a greater number of readers than any in the book. It seems to us that the article lacks somewhat in clearness, but on the whole it is a satisfactory exposition of the present "state of knowledge" of this very important subject.

Nephritis. A Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden, Physician in Chief to the City Hospital, Frankfort a. M. Authorized American Translation Under Direction of Boardman Reed, M.D., Philadelphia, Pa. Price, \$1.00. New York: E. B. Treat & Co., 1904.

Prof. von Noorden has, as usual, given an introductory space of several pages, followed by Part I. on the customary therapy of kidney diseases. In Part II. he takes up the principles of saving the kidneys in renal diseases, and in Part III. takes up the facts of metabolism as a basis for the dietary regulations to be adopted in the protective therapy of kidney disease. In the reviewer's mind there are many new and original points of interest in this book as regards diet and treatment, and his vast experience has led him to write a very interesting little treatise on the kidney affections and their treatment.

BOOKS RECEIVED.

Medical and Surgical Report of the Presbyterian Hospital in the City of New York. Volume VI., January, 1904. Edited by Andrew J. McCosh, M.D., and W. Gilman Thompson, M.D.

Childbed Nursing. By Chas. Jewett, M.D. New York: E. B. Treat & Co., 1903.

Medicine. Edited by Frank Billings, M.D., and J. H. Salisbury. Vol. VI., May, 1904, of the Practical Medicine Series of Year Books. G. P. Head, M.D., General Editor of Series. Chicago: Year Book Publishing Company, 1904.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by A. H. Hare, M.D., assisted by H. R. M. Landis, M.D. June 1, 1904. Philadelphia and New York: Lea Bros. & Co.

Health Reports.

CHICAGO HEALTH REPORT.

For the first time since the supervision of the city's milk supply was undertaken by the Department in 1893, every sample of milk and cream collected by the milk inspectors during the week was found up to or above the ordinance standards—3 per cent. of butter fat for milk and 12 per cent. for cream, many of the milk samples showing over 4 per cent. and some cream 15 and 16 per cent. of butter fat. In January, 1893, the samples collected averaged less than 10 per cent. up to the standards. The improvement has been steady and progressive during the period until the average of below grades, month after month, is now less than 6 per cent., and the death rate among the young—especially among those between one and five years of age, the "milk feeding period"—has steadily and progressively diminished.

The Commissioner is especially gratified with the results of the efforts to improve the conditions of milk production by the inspection of dairies and dairy farms. During the working days of the last three weeks 355 dairy farms, with 6,288 cows have been inspected and the milk from 72 dairies, or about 20 per cent., has been excluded from sale in Chicago until the owners comply with the sanitary requirements of the Department based upon the city ordinances.

The educational effect of this exclusion is shown in the following figures: During the first week 88 dairies were inspected, out of which number it was found necessary to exclude the milk of 32, or more than one-third, 36.3 per cent.; during the second week 135 were inspected and 29, or 21.4 per cent., were excluded; last week, with only four and a half working days, there were 132 dairy farms and 2,781 milch cows inspected and the milk from only 11, or 8.3 per cent., was excluded.

The dairy farmer is quick to learn if he is properly approached and the reasons of the requirements are explained to him. As *The Journal of the American Medical Association*, in its current (July 9th) issue, says: "The continuation of this faithful, painstaking work of inspection will be fully paid for by the saving of lives and health, as has been amply demonstrated in the past," and the farmer recognizes this as the justification of the Department's strenuosity.

There were 20 fewer deaths under 5 than during the previous week and 92 fewer than one year ago—a decrease of more than one-half. The water supply was “safe” from all sources throughout the week, and the 31 deaths from the acute intestinal or impure water diseases are 37 fewer than in 1903, while the 395 deaths from all causes are 168 fewer.

The Chicago undertaker is not being overworked at present.

Statement of mortality for the week ended July 9, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated mid-year populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	July 9, 1904.	July 2, 1904.	July 11, 1903.
Total deaths, all causes....	395	398	563
Annual death rate per 1,000.	10.68	10.75	15.62
By sexes—			
Males.....	236	243	322
Females.....	159	155	241
By ages—			
Under 1 year.....	64	67	120
Between 1 and 5 years.....	20	37	56
Over 60 years.....	73	73	104
Important causes of death—			
Acute intestinal diseases....	31	28	68
Apoplexy.....	13	5	9
Bright's Disease.....	37	27	35
Bronchitis.....	7	6	12
Consumption.....	68	46	45
Cancer.....	19	22	28
Convulsions.....	8	7	17
Diphtheria.....	4	7	4
Heart disease.....	37	36	41
Measles.....	1	0	3
Nervous diseases.....	18	23	49
Pneumonia.....	33	34	51
Scarlet fever.....	1	2	8
Suicide.....	5	9	10
Sunstroke.....	1	2	26
Typhoid fever.....	4	4	7
Violence (other than suicide)	30	41	40
Whooping cough.....	2	2	4
All other causes.....	76	115	106

Notices.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

The thirty-fifth annual meeting of the American Medical Editors' Association, held at Atlantic City in June, 1904, was one of the most successful in its history. C. E. de M. Sajous, President, presiding.

The many papers presented, as well as the numerous applications received for membership, is possibly the best indication of the interest displayed in the Society. Among the new members who joined at this meeting were the following:

Dr. Herman Knapp, editor of the "Archives of Ophthalmology," New York.

Dr. J. Madison Taylor, "Sajous Encyclopedia," Philadelphia, Pa.

Dr. Joseph McFarland, "Medicine," Philadelphia.

Dr. H. Longstreet Taylor, "St. Paul Medical Journal," St. Paul, Minn.

William Davis, "St. Paul Medical Journal," St. Paul, Minn.

Surgeon General Walter Wymann, "Sajous Encyclopedia," Washington, D. C.

Louis L. Pilcher, "Annals of Surgery," Brooklyn, N. Y.

H. Enos Tuley, "Louisville Journal of Medicine," Louisville, Ky.

Andrew Mac Phail, "Montreal Medical Journal," Montreal, Can.

A. W. Wright, "Canadian Practitioner and Review," Toronto, Ont., Can.

George Elliott, "Dominican Medical Monthly," Toronto, Ont., Can.

E. E. Dorr, "Iowa Medical Journal," Des Moines, Iowa.

Frank B. Cross, "Lancet Clinic," Cincinnati, Ohio.

F. E. Daniel, "Texas Medical Journal," Austin, Texas.

William F. Waugh, "Alkaloidal Clinic," Chicago, Ill.

Wm. J. Robinson, "Critic and Guide," New York.

Raymond Wallace, "Southern Medicine and Surgery," Chattanooga, Tenn.

C. Sumner Witherstein, "Sajous Encyclopedia," Philadelphia, Pa.

F. W. Samuel, "American Practitioner and News," Louisville, Ky.

Arthur J. Patlk, "Wisconsin Medical Journal," Milwaukee, Wis.

Langon B. Edwards, "Virginia Medical Semi-Monthly," Richmond, Va.

Clarence A. Smith, "Northwest Medicine," Seattle, Wash.

Horatio C. Wood, Jr., "Therapeutic Review," Philadelphia."

Albert E. Stern, "Medical and Surgical Monitor," Indianapolis, Ind.

James U. Barnhill, "Columbus Medical Journal," Columbus, Ohio.

Samuel F. Brothers, "Medico Pharmaceutical Journal," New York.

Alfred B. Meacham, "Post Graduate," New York.

G. L. Harrington, "Brooklyn Medical Journal," Brooklyn, N. Y.

Among the interesting papers read and thoroughly discussed we would mention:

"Proprietary and Patent Medicines," Harold N. Moyer, Chicago, Ill.

"Military Medical Journalism of the Present Day," Major J. Evelyn Pitcher, Carlisle, Pa.

"Sundown Journalism," T. D. Crothers, Hartford, Conn.

"Medical Illustrations," H. V. Wurdemann, Milwaukee, Wis.

"Medical Journalism of the Pacific Coast," Winslow Anderson, San Francisco, Cal.

"The Medical Press vs. the Modern Plague," William Porter, St. Louis, Mo.

"Reading Notices," W. C. Abbott, Chicago, Ill.

"Imitation Journalism," H. Waldo Coe.

Following an animated discussion of Dr. Porter's article relative to the use of patent nostrums, the following resolution, endorsing the action of Mr. Bok, editor of the "Ladies' Home Journal," was favorably acted upon;

WHEREAS, The public is, and long has been, suffering from the use of nostrums, and from the misuses of medicines; and

WHEREAS, The medical profession and press have endeavored by every means in their power to instruct the laity upon the subject; and

WHEREAS, Some journalists either do not understand the true situation, or find it to their pecuniary gain to favor the use of nostrums and pander to the greed of their manufacturers at the expense of the health or even the lives of their dupes among the people; and

WHEREAS, The eminent editor of the "Ladies' Home Journal," Mr. Edward Bok, in an able and vigorous editorial on page eighteen of the May number of that journal, laid the truth of the matter before his readers, thus aiding in the work of warning and educating and conserving the health and welfare of the public, be it

Resolved, That the American Medical Editors' Association approves and commends Mr. Bok for the honest, fearless and well-grounded position he has taken, which has been thoroughly appreciated by us and by the medical profession generally.

Resolved, That a copy of these resolutions be spread upon the minutes of this meeting, be transmitted to Mr. Bok, and be published in the medical journals throughout the country.

Dr. Porter presented the following resolution bearing upon the death of Dr. I. N. Love, an ex-President of the American Medical Editors' Association:

Through the joys of to-day come refrains in minor key. We welcome our friends again, but some have dropped out forever. One day eager in all that makes the activities of life—the next cold and silent on the bosom of the dark, mysterious river. Dr. I. N. Love was no ordinary man. Endowed as few are, he cultivated the art of showing to others the natural buoyance of his nature, and keeping well within himself the burden and shadows that few knew of and the many never dreamed of. No one was better known in the medical societies of the country and especially in this Association. Quick, witty, generous, he made friends at every turn, and if to-day he made an enemy, to-morrow he was likely to kill him with kindness.

Of his work as a physician and an editor, you who were his friends through the decades need not be told. As a physician he was sympathetic and intelligent beyond the possibilities of most men. The devotion of his patients was a natural sequence following the sunshine of his presence in the sick room. As an editor he was original and personal, but his personalities were more likely to be eulogistic than censorious. He called his journal "a reflex of the medical profession," but it was more notably a reflex of his own life.

Realizing the difficulty of expressing a just appreciation of the life of one so brilliant, so fascinating and energetic, yet in token of the sense of loss it has sustained by the Association, be it

Resolved, That the members of the American Medical Editors' Association, while mourning the decease of Dr. I. N. Love in the zenith of his manhood and opportunities for usefulness, remember and cherish the recollection of all in his most attractive individuality that made his record so large a part of the history of this Association.

Resolved, That a large page of our record books be set apart for the resolutions, and that a copy be sent, with our truest sympathy, to the members of his family.

WM. PORTER,
C. F. TAYLOR.

A committee was appointed by the Chair, composed of C. F. Taylor, Chairman; Dr. Hoggehead, of San Francisco, Cal., and Dr. Pilcher, of Carlisle, Pa., and the Secretary, member *ex-officio*, to draft a new Constitution and By-laws to be presented at the next meeting.

The following officers for the coming year were elected:

President—Harold N. Moyer, Chicago, Ill.

First Vice President—C. Evelyn Pitcher, Carlisle, Pa.

Second Vice President—O. F. Ball, St. Louis, Mo.

Secretary and Treasurer—J. MacDonald, Jr., New York.

The Executive Committee: C. F. de M. Sapous, Chairman; John Panton, W. A. Young, W. C. Abbott, H. M. Simmons, C. F. Taylor and Chas. Wood Bassett.]

This Association now enjoys a membership of over one hundred active medical editors, and those medical journalists not now associated are invited to present their applications for membership to the Secretary, Dr. J. MacDonald, Jr., 100 Williams street, New York City, N. Y.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended July 21, 1904:

BAUHACH, PETERSON H., Surgeon—Seven days leave of absence from July 17, 1904, under Paragraph 189 of the regulations.

MEAD, F. W., Surgeon—Granted extension of leave of absence for one month from August 1st July 19, 1904.

WHITE, J. H., Surgeon—Granted extension of leave of absence for three days from July 18th. July 15, 1904.

CLARK, TALLAFERRO, Passed Assistant Surgeon—Relieved from duty at Ellis Island, N. Y., and directed to proceed to Philadelphia, Pa., and report to medical officer in command for assignment to exclusive duty in connection with examinations of aliens. July 19, 1904.

HOBBS, W. C., Passed Assistant Surgeon—Granted leave of absence for twenty-four days from July 26th. July 19, 1904.

RAMUS, CARL, Passed Assistant Surgeon—Relieved from duty at San Francisco, Cal., and directed to proceed to Honolulu, T. H., and report to chief quarantine officer for duty, relieving Assistant Surgeon R. L. Wilson. July 15, 1904.

STANSFIELD, H. A., Passed Assistant Surgeon—Relieved from duty in the Hygienic Laboratory and directed to report to the Chairman of the Isthmian Canal Commission for duty on the Isthmus of Panama. July 13, 1904.

WILSON, R. L., Assistant Surgeon—Upon being relieved at Honolulu, T. H., by Passed Assistant Surgeon Carl Ramus, to proceed to Washington, D. C., and report to the Director of the Hygienic Laboratory for duty. July 15, 1904.

HARTIS, B. V., Acting Assistant Surgeon—Granted leave of absence for thirty days from August 1st. July 21, 1904.

TAPPAN, J. W., Acting Assistant Surgeon—Department letter of July 6, 1904, granting Acting Assistant Surgeon Tappan leave of absence for thirty days from July 10th, amended to read from August 24th. July 15, 1904.

TODD, W. C., Acting Assistant Surgeon—Granted leave of absence for fourteen days from July 15th. July 19, 1904.

WALKER, R. T., Acting Assistant Surgeon—Granted leave of absence for four days from July 26th. July 16, 1904.

MCDOWELL, W. F., Pharmacist—Granted leave of absence for thirty days from August 8th. July 15, 1904.

RYDER, L. W., Pharmacist—Granted leave of absence for thirty days from August 15th. July 18, 1904.

WATERS, M. H., Pharmacist—Granted leave of absence for twenty-five days from August 15th. July 15, 1904.

PROMOTION.

Assistant Surgeon H. A. Stansfield commissioned as Passed Assistant Surgeon, to rank as such from June 4th. July 11, 1904.

BOARD CONVENED.

Board convened to meet at the Marine Hospital, Stapleton, N. Y., July 18, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon A. C. Smith, Chairmn; Passed Assistant Surgeon J. B. Greene, Recorder.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended July 28, 1904:

GLENNAN, A. H., Assistant Surgeon General—Granted leave of absence for fifteen days from August 1st. July 22, 1904.

IRWIN, FAIRFAX, Surgeon—Granted leave of absence for one month from August 15th. July 26, 1904.

KALLOCH, P. C., Surgeon—Granted leave of absence for twenty-two days from August 1st. July 28, 1904.

MCINTOSH, W. P., Surgeon—To assume temporary charge of Portland (Me.) quarantine, in addition to other duties during the absence on leave of Surgeon P. C. Kalloch. July 28, 1904.

GUITERAS, G. M., Surgeon—Bureau letter of July 11, 1904, granting Surgeon Guiteras leave of absence for seven days from July 14, 1904, amended to read four days only. July 26, 1904.

McMULLON, JOHN, Passed Assistant Surgeon—Granted leave of absence for one month from August 5th. July 28, 1904.

GLOVER, M. W., Assistant Surgeon—Bureau telegram of July 13th, granting Assistant Surgeon Glover leave of absence for seven days on account of sickness, amended to read five day from July 12th. July 25, 1904.

WARD, W. K., Assistant Surgeon—To proceed to Bridgeton, Barbadoes, B. W. I., for duty in office of the United States Consul. July 12, 1904.

STILES, Chas. W., Zoologist—Detailed to represent service at Sixth International Congress of Zoology at Berne, Switzerland, August 14–19. July 22, 1904.

SEAVEY, L. T., Acting Assistant Surgeon—Granted leave of absence for fourteen days from August 8th. July 27, 1904.

SMITH, EMMA F., Medical Inspectress—Granted leave of absence for thirty days from July 1st. July 22, 1904.

BOARD CONVENED.

Board convened to meet at Washington, D. C., August 1, 1904, for the physical examination of an officer of the Revenue Cutter Service, and an applicant for admission into said service. Detail for the Board: Assistant Surgeon General G. J. Vaughan, Chairman; Assistant Surgeon A. J. McLaughlin, Recorder.

PROMOTION,

L. C. Spangler, Pharmacist of the third class, promoted to be Pharmacist of the second class, effective May 28th. July 25, 1904.

THE
AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

VOL. XXXVIII. LOUISVILLE, KY., SEPTEMBER 1, 1904. NO. 155.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. RUSKIN.

Original Articles.

PURULENT INFLAMMATION OF THE MASTOID PROCESS
AND ITS TERMINATIONS ILLUSTRATED
WITH CASES.*

BY ADOLPH O. PFINGST, M.D.

Professor of Diseases of the Eye, Ear, Nose and Throat, Kentucky University, Medical Department, Louisville, Ky.

Whenever an acute inflammation of the mastoid process does not subside after a brief period, usually not exceeding eight days, it terminates in the formation of pus. When pus has once formed we know that if not evacuated it will, with but few exceptions, sooner or later find its way out of the mastoid, either inward to the cranial cavity or through the cortex into the external soft parts. However, it is asserted by the best authorities that an abscess of the mastoid bone may heal spontaneously by absorption of the pus, with a complete restoration of the parts. It is difficult to determine just how often this has occurred, for without opening the mastoid cells it is impossible to differentiate between simple and purulent inflammation of the bone. Spontaneous recovery is said to occur, especially in cases of primary otitis.

Another exceptional termination of mastoid suppuration is by a spontaneous discharge of the pus through the middle ear and auditory canal. The following case, reported briefly, will serve as an illustration. A man of fifty-five years was seen about eight years ago, in

* Read before the Mississippi-Hill Medical Society, Louisville, Ky., August 14, 1904.

consultation with Dr. Geo. Warner, suffering severe pain in and about the left ear. The patient gave a history of otorrhea of two weeks' duration which had suddenly ceased, and which was followed immediately by a severe pain. When I saw him, about eighteen days after the beginning of the trouble, there was a scant discharge from a perforation in the posterior inferior quadrant of the left ear drum about three-sixteenths of an inch in diameter. There was some redness over the mastoid, slight swelling and extreme tenderness on pressure over the antrum. When we called on the following day prepared to open the mastoid we learned that there had been a sudden and copious discharge of pus through the ear canal during the night, which was followed by a complete subsidence of pain. The tenderness over the bone had also disappeared. Pus continued to discharge freely for several weeks, and gradually stopped entirely. About six weeks ago I was informed by the wife of the patient that there had been no further trouble after cessation of the otorrhea. It is evident that the pus locked in the mastoid cells and probably the antrum, which had given rise to such severe pain, was suddenly liberated by the giving away of some bony lamella or thickened mucous membrane, and had discharged by way of the aditus, attic and tympanic cavity.

A more common termination of mastoid abscess is in cario necrosis of the osseous lamella separating the mastoid cells with the formation of granulation tissue. Politzer says that these changes usually take place after the abscess has existed for a long time; occasionally, however, as early as the tenth to the fourteenth day after the beginning of the trouble. Even after the necrotic process has brought about such changes spontaneous cure without perforation of the osseous cortex has taken place.

In such cases there is a tendency for the granulations to ossify.

In nearly every case in which the mastoid process contains pus and granulations, if not operated upon, perforation of the external cortical layer will eventually take place, forming a fistulous opening. This is the most common termination of neglected cases of mastoid suppuration. Spontaneous perforation takes place most frequently through the external surface of the bone. It may occur at a point corresponding to the position of the antrum, but more frequently it occurs lower down. Occasionally it breaks high up, as in one of the cases which I will include in this report. When the pus leaves the bone a swelling usually develops over the point of perforation in which fluctuation can usually be detected early. Unoperated cases of this kind finally break through

the skin, either at a point corresponding to the opening in the bone or at some distance away from it. The latter will also be illustrated in one of the cases to be reported. The abscess may also break through the inner plate of the mastoid tip into the digastric fossa. These so-called cases of Bezold mastoiditis are uncommon. They usually cause an induration at the insertion of the sterno cleido mastoid muscle, and in neglected cases pus burrows and is found in the sheath of the muscles and sometimes in the sheathes of the large vessels of the neck. Pneumatic mastoids, with several large cells, are especially prone to perforate into the digastric fossa. A case of this kind will also be reported.

Mastoid abscess may also perforate the posterior superior wall of the auditory canal, causing first a sagging of that wall (a symptom characteristic of suppuration in the attic), and finally break and discharge pus through the ear canal.

The last four cases of mastoid abscess which have come under my observation all illustrate one of the conditions just described, and were the incentive for this paper. I will cite them briefly, bringing out only those points that will serve to illustrate the course and termination of unoperated cases of mastoid abscess.

FIRST CASE.—Acute suppurative mastoiditis following grippe: spontaneous formation of osseous fistula on outer side of bone very near the tip. A young lady of twenty-four years had suffered for six weeks or more before I saw her, the left ear discharging pus at intervals. She had given the condition little or no treatment. There was tenderness on pressure over the antrum, but not at the tip. Over and just below the tip there was some swelling and redness, but no tenderness on pressure. There was no other symptom of mastoid involvement but pain. The operation revealed a small, round, circumscribed opening in the outer surface of the mastoid almost at the extreme tip. The opening was occluded with a little plug of granulation tissue, but insertion of a probe caused a flow of pus. The bone was removed upward following the probe until the antrum was exposed. This was filled with pus and granulation tissue. These were removed and communication with the attic established. The patient made a good recovery, the wound closing in seven weeks. This case illustrates one of the extremes in the point of perforation of the pus low down at the tip, and shows that the point of tenderness does not always correspond to the location of the fistulous opening in the bone.

SECOND CASE.—Acute mastoid abscess, spontaneous perforation

through the external cortical plate high up, spontaneous rupture through the soft parts away from the osseous fistula, through the upper and posterior portion of the ear canal. This was also a neglected case. A woman of fifty years had when first I saw her suffered for two months with great pain in her left ear, the beginning of the trouble dating back to an attack of grippe. The discharge of pus had been so copious that the ear would fill up soon after irrigation and the pus discharge externally. When I saw her there was tenderness on pressure over the mastoid high up. There was little or no boggiess over the mastoid bone proper, but high up, ranging forward over the auricle, a distinct swelling could be made out, which collapsed upon pressure and discharged its contents (pus) into the ear canal. Elevation of the periosteum disclosed a circumscribed round opening one-eighth of an inch in diameter in the bone high up just above the level of the upper border of the osseous canal, and about $1\frac{1}{4}$ inches behind the posterior wall of the canal. The opening, which was filled with granulation tissue, was enlarged downward and forward, and the antrum exposed and freed of pus and granulation tissue. Immediately behind the perforation the lateral sinus was exposed. All necrosed bone was removed and communication established with the attic. This woman, although relieved of her pain, has a fistulous opening behind the ear, indicating the possibility of more necrosed bone.

An extraordinary high point of perforation is illustrated in this case, and it further shows how pus, after leaving the bone, may burrow and break through the soft parts some distance away.

THIRD CASE.—Acute suppurative mastoiditis following typhoid fever; formation of fistula through the inner surface of the mastoid tip into the digastric fossa—so-called Bezold mastoiditis. A medical student, age twenty-six, while convalescing from typhoid fever, complained of pain in his right ear, which was soon followed by a discharge of pus. The pain disappeared entirely after several days, and the patient left the infirmary with instructions to irrigate the ear regularly and report at the office every other day. He failed to report for ten days, and then sent for me because he was suffering considerable pain in and about the right ear. His head was drawn downward and toward the right when I saw him. There was only a scant discharge of pus, only slight pain on pressure over the mastoid, but considerable pain on pressure just below the tip of the bone. There was induration and redness at that point. Upon removing the periosteum from the outer surface of the mastoid the bone appeared perfectly normal. The

antrum was opened, and pus and swollen mucous membrane removed. Communicating with the antrum downward were several large cells also filled with pus and granulations. After cleansing these cavities a small opening was discovered in the bone on the inner side just above the tip. The probe could be passed through this into the digastric fossa. The entire tip of the mastoid was removed and the communication established between with the attic. Five weeks have elapsed now since the operation, and all but a shallow granulating wound remains. This was a typical case of Bezold mastoiditis, with no other feature of interest.

With the possibilities for spontaneous cure of perforation of the bone facilitating the diagnosis, it would seem justifiable to wait for pronounced symptoms before resorting to operative procedure in mastoid abscess. However, we know, on the other hand, that in a certain number of cases the pus finds its way into the cranial cavity and sets up meningitis, extra-dural or brain abscess. Although such cases are in the minority the possibilities are so grave that the majority of aural surgeons of to-day operate whenever there is a persistent pain and the presence of pent up pus can reasonably be established. A case with obscure symptoms, and one in which, in my judgment, there was great danger of extension internally is illustrated in the following: A lady, thirty years old, soon after an attack of measles developed ear-ache on the left side. The pain was followed in a few days by otorrhea, which has continued, with only an occasional cessation of several days, until I saw her, six weeks after the beginning of the trouble. I was called to the country to see her and found the drum intact, with no bulging, but slight redness. Tenderness over the mastoid was so slight that its presence was questionable. The only one of the classical signs of mastoid involvement present was a marked bulging of the superior posterior wall of the auditory canal. Temperature, 100°. I made a free incision across the drum just below the malleus, but obtained only a sero-sanguinous discharge. Three days later I was notified by her husband, a physician, that the paracentesis had given her relief for thirty-six hours, but that the pain had returned with increased violence. It had extended to the occiput, and was so severe that it took from one-half to three-fourths grains of morphia to relieve her. I had her brought to the city, and at the infirmary again incised her drum freely with the same result as at the first incision. She was easy for twenty-four hours, during which time I had hot applications made and the ear irrigated regularly. With return of the pain and

the persistence of the swelling of the ear canal, I decided to explore the mastoid. The antrum was opened, but was found to be healthy and clean. The cells above the antrum appeared hyperemic, and in working upward my way toward the attic I found granulation tissue blocking the aditus. Upon opening the canal with a curette a half thimbleful of unmistakable creamy pus was liberated. The aditus was enlarged to insure drainage, and the wound packed. There was no further pain, and the patient made an uninterrupted recovery.

This case illustrates the diagnostic importance of the sagging of the posterior superior wall of the meatus. It also demonstrates the importance of exploratory surgical measures in cases of doubtful diagnosis. An individual with pus in his mastoid cells, like the individual with pus in his appendix, may recover spontaneously, or there may be a period of quiescence, but in either case the patient may be compared to a man smoking in a powder magazine; the spark may not ignite the powder for a long time, but when it does the consequences are very serious.

127 West Chestnut Street

HYDROPHOBIA.

BY C. A. EDELEN, PH.D., M.D.

Assistant to Chair of Surgery, Kentucky School of Medicine, Louisville, Ky.

In the study of the disease we should at first think what the name implies, hydrophobia meaning a fear for water, which is an appropriate term when speaking of the disease in man, but does not fill the requirements when speaking of the disease in the lower animals, for here we do not have the fear for water, and the animal will try to drink long after it is unable to swallow, and in its persistent efforts will plunge the head in over the ears in an attempt to get the water to run down the throat. This being the case, it should be spoken of as rabies when in the lower animals.

At this season of the year, when so many of the minds of the laity are being agitated by the report of rabid dogs in the community, it seems in place to say something about the disease. Strange, it seems that a disease that is so much spoken of and so horrifying to the laity is so little spoken of by the profession, even though the condition is a rare one it should be studied more closely by the profession, so that we

will be able to give our clientele correct instructions as to the cause and course of the trouble, and thereby relieve many of their ungrounded fears.

The first thing to attract our attention is the extreme rareness of the disease. Many so-called cases are nothing more than ordinary tetanus, for in the dog (which is the animal usually conveying the disease to man) we find that he is continually carrying decomposing material in his mouth and many other things that are infected by different forms of bacteria; hence the individual is merely infected by tetanus and dies in convulsions which are not the result of infection by rabies. This being the case, the animal that is supposed to be rabid should not be destroyed, as is the usual custom, but should be confined and kept under close observation and see what the outcome will be, and many times a dog that is thought to be mad will, when kept quiet and cool, get well within a few hours, showing that it was merely a condition of overheat, while those that are bitten during the crazed stage of the animal, if it is kept in observation as advised, will be relieved of that mental agony which they would have to go through with if the animal was destroyed, and every means of knowing whether or not it was mad or just affected as above described. The first thing in the study of the disease is to study its course in the lower animals. After a variable period of from a few days to a year in the longest case the animal is dull, and shows distinct evidence of mental disturbance; he is shy, restless, hides himself, has illusions shown by snapping at invisible objects; if examined close will show a red throat and sticky saliva, and at this stage insensibility to pain, paralysis of deglutition, quick breathing and dilated pupils, madness of manner, etc. Following this comes the stage of paralysis, and finally death from exhaustion in about a week.

In man the period of incubation seems to vary a great deal. In 106 cases of the disease in all ages, 23 occurred in two months; the rest came in at varying periods, the longest being eight months. Flemings, an authority on this subject, says the disease never occurs after eight months from the period of infection, and where cases were reported that it had developed several years later was, without doubt, a mistake and a lack of accuracy as to the time the patient became infected. Either that or the diagnosis was not correct, or infection occurred at a more recent date. Age has, no doubt, some considerable influence in modifying the time and duration of the disease, and the stage of incubation. It has been accurately ascertained that some few

cases yet in the teens were watched very closely, and found that the period of incubation lasted about six weeks or two months.

The symptoms are ushered in by a period of premonition, such as a feeling of uneasiness, itching and burning in the wound; actual pain may be present; your cicatrices frequently presents a congested appearance, tender to touch, and the pain may radiate along the course of the nerves supplying the parts around the wound. Your patient becomes very irritable, restless, melancholic, low spirited, associated with some fever, rapid pulse, voice harsh and husky, stiffness of the muscles, swallowing quite difficult, and likely a general hyperesthesia to such an extent as to cause, at the height of the attack, a general reflex spasm, which are of a very distressing character; involving the muscles of the larynx, pharynx and mouth, which is followed by intense dyspnea, and all efforts to swallow water are hopeless and quite painful; trembling becomes manifest, sensations of stricture are felt about the throat and chest, catching of the breath, impending suffocation, desire for fresh air, but there are no symptoms so common as those mentioned before, which are those of violent convulsions, spasm of the muscles of the larynx, pharynx or gullet, shuddering tremors, etc; some fever, reaching to 101° to 102° , hallucinations of sight and hearing. But the most distressing symptom is the fear of impending death, which is manifested by the patient soon after the attack, the final being the result of asphyxia, the result of spasm of the glottis.

Tetanus is to be differentiated from rabies by the history of the case, the character of the wound, the period of incubation and the difference in the set of muscles involved, and from pseudo-rabies by no fever, no prostration and the exaggerated symptoms.

Treatment—When it comes to this the first thing is to eliminate from the patient's mind the fear that he will become mad just because he has been bitten by a dog. This can be done by explaining to him the extreme rareness of the disease (or if the dog has been kept to tell him there is nothing wrong), or if the case in the dog proves to be one of genuine rabies to send him at once to a Pasteur Institute, where he can avail himself of the most glorious laboratory research; for it is probable that recovery never took place by the use of anything save the inoculation treatment, and to dispel from him the old idea that a mad stone will do him good; for if he really was bitten by a rabid dog he would lose his money and his life fooling with something that

is a farce in every sense of the word. Drugs are of no use to relieve the spasms after they come on.

When the bite is first received it should be cauterized with carbolic acid after all the poison has been sucked out by the mouth of the patient or some one who is willing to do it for him.

LOUISVILLE, KY.

MASSAGE AND ELECTRICITY VERSUS OSTEOPATHY.*

BY DR. JOHN ENGLISH.

It is my earnest endeavor, in the writing of this paper, to try to show the profession that we are better equipped to practice osteopathy than the osteopaths themselves, taking into consideration all the late electrical machinery and vibratory massage apparatuses. The osteopath's long suit is his anatomy. Why should he know any more anatomy than any one of us? They use the "Gray's Anatomy" in their schools the same as we do. They can not possibly get any more from a book than we can, provided the same amount of study is done by us as is done by them. They do two things that we can not do according to the code of ethics of the American Medical Association: that is to advertise and practice quackery; that is the reason why they have gained so much ground in the last few years, and not because they get such wonderful results. We can not utterly condemn osteopathy, for I believe, as many others do, that they do some good; but we can conscientiously condemn the way they hoodwink the people by their falsehoods. I will just relate, by way of an illustration, what one of an osteopath's patients told me. He was an intelligent looking, also an intelligent talking young man, about thirty years of age, living in Chicago, was treated by a specialist of that city for two years for some defect in vision without any improvement whatever. He came to his place of birth on a visit and met an osteopath, and while in conversation with him he mentioned his eye trouble. The gentleman with D. O. after his name at once told him he had cured a host of cases just as hopeless as his, and felt sure he could benefit him. A drowning man will grab a straw, so this man grabs at the osteopath. He first went to his office for an examination and consultation free; that word *free* catches a multitude of suckers. After twisting his head around and about quite awhile, he asked him if he did not get a

* Read before Medical Society, H. C. Medical Society.

fall in childhood. Of course the fellow said yes. Every one of us had a fall when we were growing up more than likely. He then said when you fell you dislocated the cervical vertebra, and the muscles that control the movements of your eyeballs are attached to them, and that is what causes that defect in your vision. Now, just think of the rotary muscles of the eye being six inches long and attaching to the vertebra. What an absurd statement. Lastly, of course, he told the fellow that about two months of his treatment was what he needed ; the fellow took two months plus one at twenty-five per, and then claimed that he was all right, but before the doctor of osteopathy turned him loose he sent him to an optician, and had him fitted with glasses. Now that is the way that hundreds are caught by these fellows with a long cock and bull story like this. Now, the class of people that they get are the ones that have some old chronic trouble and plenty of money ; they never lose a bill. Why should we not get this money as well as them, for as a general rule we need it just as bad and are honorable practitioners?

They claim to treat all diseases without knife or drugs. How would they manage a case of pneumonia or typhoid fever by just rubbing around over a man? Massage is their hobby, but it will not work in every case. We can do more with a massage vibration in fifteen minutes that an osteopath can by manipulating his way in an hour and a half, and we are not tired after giving a treatment like he is. We economize in regard to our time. Also, I will now make mention of some of the diseases that they claim such wonderful results from their treatment :

First, rheumatism our old standby ; it has been here always and always will be. What better results can a man want than you get in this class of patients with electricity? I defy any osteopath to get the results from his treatments that we do by static electricity. The reason I say this is that I have gotten several from the hands of the osteopath, and they claim more for electricity than any treatment they have ever taken. We meet in rheumatism with results threefold. First, most cases are promptly relieved of the local condition. Second, marked improvement follows in the patient's general health. Lastly, decided increase in the aggregate of solids eliminated with the urine, as well as a marked diuresis in many cases will be noticed. In cases of myalgia static electricity is almost a specific. No case of myalgia would ever reach the osteopath's hands if static electricity was applied first.

Another disease that the osteopath claims that his treatment reigns

supreme is chronic constipation. You will hear their patients say that immediately after a treatment my bowels will move in spite of all I can do. We can take a massage vibrator and give him treatment, and he will loose no time in having an action on his bowels immediately afterwards either. The way they punch and knead a person of course they reach the deep structure. We can take our vibrator and give it the speed, and go just as deep; make a person's entire body shake throughout.

Synovitis, neuritis, also the painful neuroses, are equally benefited by electricity. Sciatica, in nearly every instance, responds readily to treatment with the static spark. Migraine, paralysis, epilepsy, chorea, contractures, torticollis, tremors, neurasthenia, hysteria, hypochondriasis, melancholia, functional insanity are all benefited more or less by electricity. Now, what can an osteopath do that we can not accomplish with our modern armentarian? His field is growing smaller each day. Just as soon as the people find out that we can give that kind of treatment he will have nothing to do. The massage vibrator apparatuses are the coming thing of to-day. I have been unable so far to find any literature on the vibrator. The osteopaths are equipping themselves with all the latest electrical and massage machines. They see what can be done with them and are advertising it. What we should aim to do is to run everybody out who does not practice ethical medicine. The osteopaths are most certainly in that class, but are recognized in our State. Kentucky is the home of osteopathy, you might say. The school at Franklin is among the oldest. There are several States in the Union that have not one in it. The thing for us to do is to fight their own fires; show the people that we can do any and everything they claim, and it will be only a mere matter of time until they will be a pathy of the past.

ELIZABETHTOWN, KY.

Progress of Medical and Surgical Science.

Increase in Albumin and Nitrogen in Stomach Contents.—(*The Journal of the American Medical Association*, August, 1904.) Salomon's test consists in rinsing the stomach with salt solution one hour after careful lavage of the stomach. The rinsing fluid is tested for nitrogen and albumin, and amounts over a certain standard are evidence of the presence of ulceration, as an ulcerating surface constantly exudes more or less serum, and an increased proportion of the constituents of the serum testifies to such a condition.

It is impossible by this test to differentiate a simple ulcer from an ulcerating cancer. This must be decided by other means.

Pathogenic Importance of Hyphomycetes.—Shilling thinks that this group of fungi have been rather neglected by the pathologists. He describes the delicatessen stores as hot beds for these forms of fungus growths, and remarks that the advantages of the stale bread are frequently counterbalanced by the colonies of fungi proliferating on the bread.

He reviews the works on hyphomycetes, and relates cases of digestive disturbances due to their action.—*The Journal of the American Medical Association*, August 6, 1904.

Another Xiphopagus.—(*The Journal of the American Medical Association*, August 6, 1904.) Singer gives the photograph of a pair of twin infants united by a bridge of bone and soft parts connecting the sternums, recently delivered at the hospital at Mikolez, Hungary. Tests with bismuth demonstrated that the intestinal systems of each are separate, and hence he is only waiting until the twins are better nourished to sever the connection between them. The total weight of the xiphopagus at birth was 3,500 gm.

The parents are healthy young peasants. Both heads presented at once, and delivery was impossible until one of the twins completely twisted around on its transverse axis, and the xiphopagus was born with the feet of one twisted around with the feet of one child opposite the head of the other and vice versa, although their natural position is face to face and parallel.

Cytology of Cerebro-Spinal Fluid.—(*Journal of the American Medical Association.*) Schlesinger's study of the cerebro-spinal fluid in health and disease establishes that lymphocytosis is a valuable aid in differential diagnosis of anatomic from functional affections of the central nervous system.

Endo's Technic for Typhoid Differentiation.—(*Journal of the American Medical Association*, August 6, 1904.) Ruata has been testing the method of differentiating the typhoid bacillus, which has been published by Endo, of Kitasato's Laboratory.

The bacilli are grown on a medium containing fuchsin decolorized by sodium sulphite. The medium is transparent, and shows up well the colonies of the typhoid bacilli, which are colorless, while the colonies of colon bacilli restore the red color to the medium.

Ruata did not find the test very reliable; certainly not superior to other color differentiating tests.

Infection in Children.—(*The Journal of the American Medical Association*, August 6, 1904.) Few people realize how much more susceptible the child is to infection than any other member of the household, as he crawls about on the floor that has been made filthy by the older ones in the house bringing infectious particles on their shoes and clothing. The ladies come direct into the nursery after having dragged their skirts all over the streets, and there is deposited on the floor almost every variety of bacteria that we are familiar with; the floor is swept, and the germs that are on the floor or carpet by the millions are stirred up and an atmosphere laden with all kinds of infectious material is left for the child to breathe. And a child one or two years old, who is cutting teeth, and has the usual irritation of the gums, is constantly putting into its mouth everything that it can get its hands on, and the constant ingestion of infectious material is the cause of the so-called diarrhea that is so often associated with the teething baby. Clothing and shoes worn on the street should not be worn in doors, and especially in the nursey.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
S. B. HAYS, M. D., Manager.

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Editorial.

With all the knowledge that can be had at the present time we are yet at a loss as to the cause of cancer. All growths are classified as benign or malignant, yet we are bound to admit that some in the first class may, under certain conditions yet not known, take on a malignant type; or, in other words, there are some tumors that belong to a zone between the two above mentioned types. We see this well illustrated in the dermoid of the ovary, and in the adenomatous growths of the same organ, the last variety often shading off into that of the first by a gradation which from the clinical standpoint is almost imperceptible. Either of the commonly seen tumors may under certain conditions become malignant, and when the adenoma does become so it is highly malignant, and if the patient is operated on they usually rapidly succumb to the poison that is present and beyond the surgeon's power to remove. The dermoid likewise may to a macroscopical appearance when removed look to be simple and benign, but may in a short time

show rapid malignant changes, and especially is this true in young subjects; hence a guarded prognosis should be given in all such cases, and as thorough removal as possible should be done when operation is attempted.

EDITORIAL NOTES.

The American Medical Society for the Study of Alcohol and Other Narcotics was organized June 8, 1904, by the union of the American Association for the Study of Inebriety and the Medical Temperance Association. Both of these societies are composed of physicians interested in the study and treatment of inebriety and the physiological nature and action of alcohol and narcotics in health and disease. The first society was organized in 1870, and has published five volumes of transactions and twenty-seven yearly volumes of the *Quarterly Journal of Inebriety*, the organ of its association. The second society began in 1891, and has issued three volumes of transactions, and for seven years published a *Quarterly Bulletin* containing the papers read at its meetings. The special object of the union of the two societies is to create greater interest among physicians to study one of the greatest evils of modern times. Its plan of work is to encourage and promote more exact scientific studies of the nature and effects of alcohol in health and disease, particularly of its etiological, physiological and therapeutic relations. Second, to secure more accurate investigations of the diseases associated or following from the use of alcohol and narcotics. Third, to correct the present empirical treatment of these diseases by secret drugs and so-called specifics, and to secure legislation prohibiting the sale of nostrums claiming to be absolute cures containing dangerous poisons. Fourth, to encourage special legislation for the care, control and medical treatment of spirit and drug takers. The alcoholic problem, and the diseases which center and spring from it, are becoming more prominent, and its medical and hygienic importance have assumed such proportions that physicians everywhere are called on for advice and counsel. Public sentiment is turning to medical men for authoritative facts and conclusions to enable them to realize the causes, means of prevention and cure of this evil. This new society comes to meet this want by enlisting men as members, and stimulating new studies and researches from a broader and more scientific point of view.

As a medical and hygienic topic the alcoholic problem has an intense

personal interest, not only to every physician, but to the public generally in every town and city in the country. This interest demands concentrated efforts through the medium of a society to clear away the present confusion, educate public sentiment, and make medical men the final authority in the consideration of the remedial measures for cure and prevention. For this purpose a most urgent appeal is made to all physicians to assist in making the society the medium and authority for the scientific study of the subject. The Secretary, Dr. T. D. Crothers, of Hartford, Conn., will be pleased to give any farther information.

THE RESTRICTION OF PNEUMONIA IN MICHIGAN.

The following is interesting from the Michigan State Board :

At the meeting of the State Board of Health July 8, 1904, Secretary Baker presented an account of the work for the restriction of pneumonia in Michigan during the first five months of 1904, and its apparent influence in the lessening of that disease. A brief summary is as follows :

Since January 21, 1904, about 13,500 copies of the leaflet on the "Restriction and Prevention of Pneumonia" have been distributed throughout the State to every locality from which pneumonia has been reported. As most of the reports are secured only after a death has already been reported to the State Department, the deaths from pneumonia can not be decreased as much as is the sickness, because the leaflet of information is sent to each locality, and *disinfection is induced thereby* only after one death has already occurred. Still a wonderful showing has been made, considering that as the climatic conditions were unusually favorable for the spreading of the disease, the number of deaths would undoubtedly have increased greatly had it not been for the restrictive measures used by the health officers in dealing with the outbreaks. This will appear below. Considering first the sickness, a comparison of the percentage of weekly card reports of sickness which stated the presence of the disease in Michigan in the months of January to May, 1904, inclusive, with the average in the corresponding months of the six years, 1898-1903, demonstrates that during the first five months of 1904 there was an average decrease of 40 per cent. in the sickness from pneumonia.

Turning now from the sickness to the deaths—the Bulletin of the

Chicago Board of Health for the week ending May 7, 1904, referring to consumption and pneumonia, says: "The excessive mortality that has obtained from the two specified diseases since the first day of last November still keeps up, and all previous records, both in this city and in New York, have been far distanced this season." Speaking of pneumonia, the Bulletin of the same department for the week ending May 28, 1904, says: "Since November 1, 1903, there have been 3,703 deaths from this cause out of a total of 16,780 deaths from all causes—a proportion of more than one-fifth (22.06 per cent.) of the total mortality."

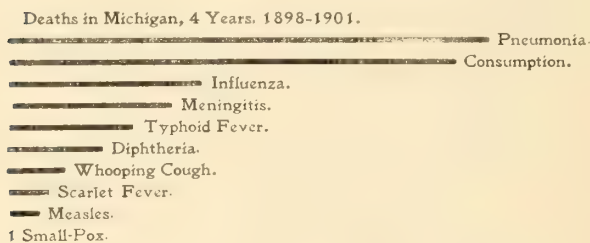
From the foregoing it is apparent that the winter of 1904 was very exceptional in the mortality from pneumonia. The winter was equally exceptional in the unprecedented long-continued low temperature. By the sickness statistics of Michigan, extending over long periods of years, it has been demonstrated that pneumonia is quantitatively related to low atmospheric temperature—low temperature increasing and high temperature decreasing the pneumonia; therefore the experience of excessive cold and deaths from pneumonia in Chicago and New York in the winter of 1904 is in harmony with a general law of nature—similar conditions producing similar results. The climatic conditions in Michigan being unusual, similar to those in Chicago and New York, there was reason to expect similar results in the increased death rate from pneumonia. The fact is that in Michigan the increase was not proportional to the continuance of the extreme low temperature. This is indicated by the mortality statistics of the State Department, and still more strongly by the sickness statistics collected by the State Board of Health. But in order to bring the subject to a mathematical demonstration, it is necessary to combine these statistics with those on meteorology. This has been done as follows:

It having been proved that the pneumonia is proportional, inversely, to the atmospheric temperature, the increase of pneumonia following the change from the warmest to the coldest month, we first find exactly how many degrees of change in temperature correspond to the average increase of pneumonia, and exactly how much the average increase is. Then if the average difference between the July temperature and the January temperature causes a given increase in the pneumonia, how much increase should occur from a difference of a given number of degrees of temperature lower than the average? Applying this method to the existing facts, it is found that there actually occurred in Michigan in the first five months of 1904, 136 less deaths than would have

occurred if the same ratio of deaths to atmospheric temperature had prevailed as the average during the preceding six years.

No amount of money could weigh against the lives of these persons saved to their friends and to the State, and it is quite possible that one of them may at some future time be President of the United States or in some other way a great public benefactor; but if the persons whose lives were thus saved were worth, for what they would earn thereafter more than required for their support, as much as one thousand dollars each (before the war of 1861-5 an average slave was valued at that), then there was a saving of money value equal to \$136,000. The courts usually allow about five thousand dollars to be paid by corporations responsible for the death of a person; at that rate of valuation the saving during the five months was over half a million dollars. Any way the subject is viewed, it is quite apparent that public health work of this sort is exceedingly profitable.—*Michigan Monthly Bulletin of Vital Statistics*, June, 1904.

RELATIVE IMPORTANCE AS A CAUSE OF DEATHS.



We note with pleasure the change of time of meeting of the American Medical Association from June to July, the next meeting occurring at Portland, Oregon, on July 11-14, 1905. This change of time will give those who are engaged in teaching in the spring and summer schools a chance to attend, a privilege they have been deprived of heretofore.

The New York School of Clinical Medicine announces the following changes in faculty: General Medicine—Professors Wm. Brewster Clark and Henry Lawrence Shively. Associate Professors—Thos. M. Acken and Edw. L. Kellogg. Gynecology—Professors Austin H. Goelet and A. Ernest Gallant. Pediatrics—Professors Dillon Brown and Henry Comstock Hazen. Nervous and Mental Diseases—Profes-

sors J. Arthur Booth and Emmet C. Dent. Gastro-Intestinal Diseases—Professor Robert Coleman Kemp. Ophthalmology and Otology—Professors John L. Adams and George Ash Taylor. Dermatology—Professor Robert J. Devlin. Laryngology and Rhinology—Professor Max J. Schwerd. Orthopedic Surgery—Professor Homer Gibney. Hydrotherapeutics—Professor Alfred W. Gardner. Genito-Urinary Diseases—Professors Wm. K. Otis, Walter Brooks Brouner and John von Glahn. Pathology—Professor E. E. Smith.

The faculties of the School have been materially enlarged.

JOHN L. ADAMS, M.D., *Secretary.*

President Amador, of the Republic of Panama, has appointed the officers of the fourth Pan-American Medical Congress, to be held in Panama the first week in January, 1905:

Dr. Julio Yeaza, President; Dr. Manuel Coroalles, Vice President; Dr. Jose E. Calvo, Secretary; Dr. Pedro de Obarrio, Treasurer, and Dr. J. W. Ross, Dr. J. Tomaselli, Dr. M. Gasteazoro, Committee men.

There will be but four sections: Surgery, medicine, hygiene and the specialties, to which the following officers were appointed:

Surgical Section: Major Louis LaGarde, President; Dr. E. B. Harrick, Secretary.

Medical Section: Dr. Moritz Stern, President; Dr. Daniel R. Oduber, Secretary.

Section on Hygiene: Colonel W. C. Gorgas, President; Dr. Henry E. Carter, Secretary.

Section on Specialties: Dr. W. Spratling, President; Dr. Charles A. Cook, Secretary.

Yours very truly,

RAMON GUITERAS, *General Secretary.*

The Mississippi Valley Medical Association will meet in its thirtieth session at Cincinnati, Ohio, on October 11, 12, 13, 1904, under the presidency of Dr. Hugh T. Patrick, of Chicago. The Grand Hotel will furnish the place for headquarters and the place of the meetings.

Dr. William J. Mayo, of Rochester, Minn., will deliver the oration on "Surgery," and Dr. C. Travis Drennen, of Hot Springs, will deliver the oration on "Medicine."

Information regarding place on programme or to the meeting can

be had by addressing Dr. Henry Enos Tuley, of Louisville, Ky., or Dr. S. C. Stanton, of Chicago, Ill.

The usual railroad rates can be obtained.

The sixteenth annual session of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held at Chattanooga, Tenn., October 12, 13, 14, under the presidency of Dr. F. B. Sloan, of Cowan, Tenn. The headquarters will be at the Read House.

Addresses will be delivered by Dr. William J. Mayo, of Rochester, Minn., and Dr. A. J. Ochsner, of Chicago.

Requests for places on the programme or information in regard to the meeting can be had by addressing the Secretary, Dr. Raymond Wallace, Loveman Building, Chattanooga, Tenn.

The usual railroad rates will be in effect.

Book Reviews.

General Pathology ; or, The Science of the Causes, Nature and Course of the Processes of Disease, by Dr. Ernst Ziegler, Professor of Pathological Anatomy and of General Pathology in the University of Freiburg, in Breisgan. Translated from the Tenth Revised German Edition (Gustav Fischer, Jena, 1901), and edited by Aldred S. Scott Warthins, Ph.D., M.D., Professor of Pathology and Director of the Pathological Laboratory in the University of Michigan, Ann Arbor, Mich. Profusely Illustrated. New York : Wm. Wood & Co., 1903.

We find "Ziegler's Pathology" a thoroughly written and well translated volume, reading smoothly and intelligently, and the subject matter modern, interesting and expressive. An introduction is in good place, heading the work, and a bibliography of important American references has been inserted by the translator, as well as the German, by the author, which bibliography has been omitted in the previous translations. Dr. Ziegler states that his presentation of inflammation and tumors has been different from some others' classifications of the ormer and causes of the latter, but believes that the criticisms directed toward his views have strengthened them rather than weakened. These criticisms have not caused the author to change these chapters. The chapters on "Vegetable and Animal Parasites" have been enlarged and enriched, and more instructive illustrations introduced. For the elucidation of the pathological phenomena caused in tissue by various infections the infection agents have full description given them. The third chapter, on the acquiring of immunity and the protective and healing forces of the human body are certainly not out of place, and very essential as well as instructive.

Ziegler's work is known of old, and has not lost its charm for usefulness to the "student of pathology," whether graduate or not. It is a reference book as well as a text book, and is profusely and well illustrated. It is a work the careful study of which elucidates its text, and we certainly commend it to those who study pathology.

Surgical Diseases of the Abdomen, with Special Reference to Diagnosis, by Richard Douglass, M.D., formerly Professor of Gynecology and Abdominal Surgery, Medical Department, Vanderbilt University, Nashville, Tenn ; ex President of the Southern Surgical and Gynecological Association ; Fellow of the American Association of Obstetricians and Gynecologists ; Member of the Gynecological Associations, etc. Philadelphia : P. Blakiston, Son & Co.

The advance in the art and sciences of medicine and surgery have demanded a work giving to the student the latest ideas in pathology and

operative technic so compiled as to be a standard teaching work for students and a guide for the surgeon and practitioner.

The author has demonstrated his ability as a teacher, surgeon and pathologist in preparing this book on surgical diseases of the abdomen with special reference to diagnosis, and has given to the profession a book that fulfills the above demand, besides being most valuable in that it instructs the surgeon as to the limits of his duty.

He clearly elucidates the difficulties of diagnosis by a more thorough study of the causes and nature of pathological conditions, and makes possible a preparatory knowledge which not only is essential to perfection in operative technic, but which will deter the conscientious operator from undertaking tasks beyond his skill.

The author thoroughly discusses every pathological condition that does from time to time occur in connection with the abdomen, and has so arranged and classified these conditions as to make his work a ready reference book. His article on peritonitis and classification of same as to causes is one of the many good features of his work.

Tuberculosis Number of the Colorado Medical Journal and Western Medical and Surgical Gazette. Edited by Wm. N. Beggs, A.B., M.D. Issue of March 1, 1904. The Colorado Medical Journal, Publishers, 133 W. Colfax Avenue, Denver, Col.

This issue of the *Colorado Medical Journal* is a booking of original communications on "Climatology and Tuberculosis," by the most eminent men on those branches, with illustrations of the authors as well as of the texts. There has probably never been an issue the equal of this, and certainly this number may be listed as a reference or library edition. It might have been bound differently, so that the index would not be divided on a page with an advertisement, for some copies have been bound for library use, and that slightly objectionable feature is apparent. This journal intends supplying regularly the subject matter of tuberculosis, replacing the much missed topic published in the *Journal of Tuberculosis*, which is now suspended. THE AMERICAN PRACTITIONER AND NEWS is pleased with the copy sent them.

An Introduction to Vertebrate Embryology, Based on the Study of the Frog and the Chick, by Albert Moore Reese, Ph.D. (John Hopkins), Associate Professor of Histology in Syracuse University and Lecturer on Histology and Embryology in the College of Medicine. With 84 illustrations. New York and London: G. P. Putnam's Sons; The Knickerbocker Press, 1904.

This small volume is certainly in its place as a concise text book of

embryology, as our studies of all obscure bodily conditions are comparative. To obtain the knowledge of the minutie this volume aptly selects the chick and the frog as subjects for study in development, and takes up the study of their developement in periods instead of a certain organ at a time.

The volume is well written and in an interesting manner, and the author being an histologist has the power to express the subject in its necessary histological manner. The illustrations are excellent, and those, with the well expressed text, well elucidate the subject. The printing, quality of paper and binding are above the average in this book.

BOOKS RECEIVED.

- Clamp and Cautery in Appendectomy**, by Jos. Rilus Eastman, M.D., Indianapolis, Ind. A Reprint from *The American Journal of Obstetrics*. Vol. No. 1, 1924. New York: Wm. Wood & Co., 1904.
- Scrums, Vaccines and Toxins in Treatment and Diagnosis**, by Wm. Cecil Bosanquett M.A., M.D.Oxon., F.R.C.P.Lond., Physician to Out Patients, Victoria Hospital for Children, London. Limp cloth. \$2.00 net. Chicago: W. T. Keener & Co., 1904.
- Freves** (Sir Frederick, Bart.): *The Student's Handbook of Surgical Operations*. New edition. 12 mo. Illustrated. Limp cloth. Net, \$2.50. Chicago: W. T. Keener & Co., Publishers, 1904.
- Tennessee State Medical Association** *Translations of the Seventy-first Annual Session*. Chattanooga, Tenn., 1924. Press of Southern Publishing Association, Nashville, Tenn.
- Translations of the American Roentgen Ray Society**. Fourth Annual Meeting. Philadelphia, Pa., December 9 and 10, 1903. Pittsburg: Murdock-Kerr Press, 1904.
- Dunham's Normal Histology**. A Text Book on Normal Histology for the use of Students and Practitioners of Medicine, by Edward K. Dunham, Ph.D., M.D., Professor of General Pathology, Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. New third edition, revised and enlarged. In one octavo volume of 334 pages, with 260 illustrations. Cloth, \$2.75 net. Philadelphia and New York: Lea Brothers & Co., 1904.
- Radiotherapy, Phototherapy and High Frequency Currents**. The Medical and Surgical Applications of Radiology in Diagnosis and Treatment, by Charles Warrenne Allan, M.D., Professor of Dermatology in the New York Post Graduate Medical School. Octavo, 618 pages, 131 engravings and 27 plates. Cloth, \$4.50 net. Philadelphia and New York: Lea Brothers & Co., Publishers.

Society Proceedings.

MULDRAUGH HILL MEDICAL SOCIETY.

The Muldraugh Hill Medical Society met in regular session in the Circuit Court room at Elizabethtown, Ky., on August 11th. There was a large attendance of physicians from different parts of the State, and a very interesting programme was disposed of.

It being the time for the annual election of officers, Dr. William Cheatham, of Louisville, was chosen President, and Dr. A. David Willmoth, of Louisville, was re-elected Secretary.

The first paper on the programme was one by Dr. Cheatham on "Foreign Bodies in the Eye."

Dr. Coomes said, in discussion: Little can be added, only to warn against infection. In two cases that came under his observation recently one lost the sight entirely, in the other the sight was very much impaired. In another that was referred to him by Dr. Allen the patient complained of something getting in the eye at the breakfast table. He was examined, but nothing found; boric acid wash was ordered. Patient went to a quack for a week, and returned with ulcer of the cornea and only light perception. He got well after some time with vision impaired. In another case of a carpenter who, while working on a house, had the eyeball injured by a nail head. Antiseptic washes were used, but the patient returned after a few days with an inflammatory condition of the entire eye, which required the enucleating of the ball.

Dr. Bolling: I believe that more cocain should be used; 5 per cent. to 10 per cent. lessen congestion, etc., and I see no bad effects. The patient should not be told that there was nothing in the eye, for many times this cutting sensation is due to inflammation, and cocain will relieve it, while if you tell them there is nothing in the eye they think that you failed to find it; therefore let them think that it is there, but use cocain and relieve it.

Dr. Pfingst: As a rule the tears are antiseptic unless the tear sack is infected; then it should be cleaned out, and where foreign bodies are removed be sure and remove that yellow material, for if you don't trouble will be most sure to follow. And in children, if needed, use

the speculum and anesthesia, especially if the foreign body is in the nose or ear; tilt out with cotton probe, and never use water unless prepared to go further.

Dr. Rodman: I think that in children anesthesia should be used, for they never move whether it hurts or not. I also think that sometimes water will aid us.

Dr. Mobley: I think that a sharp instrument is better than a spud like Dr. Cheatham spoke of, for the spud will push the foreign body in.

Dr. Smith: Live insects give the greatest pain; they should be killed by pouring oil in the ear and remove them later.

Dr. Cessna: A child was brought to me by the parents said to have a button in the nose, but on the most careful examination nothing could be found; so we can not depend on what we are told.

Dr. Cheatham (in closing): Ulcers of the cornea come on as a foreign body. As to cocaine, it strangulates the tissues, and if strong reaction may take place and give trouble; and as to the magnate, the Hobbs' strong magnate is no more dangerous than the others and much better, and in using it bring the foreign body through old opening if possible; if not, make counter opening in the iris and remove through this.

Dr. Rodman—In the discussion of Dr. Pfingst's paper said that in la grippe we find many cases, and in his hands that nothing equaled antiphlogistine applied every twenty-four hours. Every case should be watched very close for dangerous symptoms, if they should arise, that would require operation.

Dr. Cheatham: If pus is present, open, but I am careful; for here we are puzzled just as the abdominal surgeon is in appendicitis. I had one case under observation where for two winters vault fell, etc., the patient was put to bed, leeches applied and poultices used, and the "Internal Wild incision" was made five or six times each winter; the operation was deferred because of the scar that would occur; the patient got well, and last winter had measles and two or three other eruptive fevers, and no return of the old trouble.

Dr. Smith: If abscess is there it should be opened, for the dangers are too great to leave it to rupture. It may rupture in the wrong direction.

Dr. Coomes: We may have pain, tension, etc., and the patient get well, but I don't understand how pus can ever get out unless let out by operation, and if the operation is done with any caution there is no

danger, and if done thoroughly will not require the second operation. Every case where the temperature is up is very suspicious and very important. Open all cases that are very suspicious, and in doing so if the sinus is injured I think that in the most cases it will be from carelessness.

Dr. Pfingst (in closing): I think that we should see that the opening in the drum membrane is large. Those cases of inflammatory condition should be treated expectantly, and in regard to opening the sinus I think that it might be done by careful men by spicula of bone.

Dr. Aud, in discussion of Dr. McChord's paper: I don't believe that every one should try to operate, or to use taxis, for both may do untold harm, and where taxis is used it should be done with care, and the country doctor should not try to do all the operations for hernia, but should know how to do one, so he could operate in an emergency.

Dr. J. R. Wathen: The most important part of hernia is the strangulated form, and particularly that of the femoral variety. The patient should be put in the extreme Trendelenburg position, cold applied, and where you operate in this variety leave sack. Many methods are in vogue, but none are such that results are good. Cleansing of everything that comes in contact with the operative field is necessary, for here the results depend on union by first intention.

Dr. Schachner: Trusses will disappear when radicle cure is better known. Any operation is intended to obliterate the chink where the gut comes down. Opium should not be used, for it masks the symptoms; sack should not be left after being pulled down, but in the basini operation I sew the sack instead of ligating.

Dr. Wathen, in the discussion of Dr. McKay's paper: This is a very interesting work, for the general practitioner has to operate; but, fortunately for all who have to operate, the obstruction is usually low down, and the sphincter is sufficiently well formed to control the bowels.

Dr. Frank: My experience has been limited to a few cases. I have seen some cases where the doctor overlooked the condition at birth, and the child went for three or four days. I think that every case should be examined at the time.

Dr. McKay (in closing): If any opening exists do not operate; thought that the sphincter would be better if operated on early in those requiring operative measures.

Dr. Rodman read a paper on "Spontaneous Fracture of the Ribs," which was discussed by Dr. Strother, as follows: While I have neve

seen a case of this kind they are certainly of very great interest; for the condition that would necessarily have to exist to cause the bone to break so easy is of special interest for us to think over.

Dr. Aud, in discussion of the paper, reported a case where the leg was fractured during sleep at night.

Dr. Rodman (in closing) said that he was surprised in getting union so readily in bones that were so easily fractured, but here the ribs united without any trouble at all.

Dr. Frank, in discussing Dr. Bowen's paper on "Ovarian Cyst," said: I take from the history of this case that it was a compound cyst, one of two different characters of dermoids, and glandular cyst coming from the pilous glands. They present different appearance. They may rupture and cause metastatic tumors or peritonitis.

Dr. Schachner: This is a mixed tumor, and belongs to that zone between malignant and benign (adeno-cystoma).

Dr. Wathen: This is a very interesting case, and we can draw our conclusions from the report that this is a dermoid, and just where these adenomas come from we don't know; but one thing we do know is that when they become malignant they are highly so, and when patients are operated on for them they usually die of the poison. If you could remove everything they might stand some show, but this is impossible.

Dr. Bowen (in closing): The liquid was estimated at twenty pounds.

Dr. English read a paper on "Massage and Electricity Versus Osteopathy," which was discussed by Dr. Aud as follows: We saw that the osteopaths were getting some of our cases, and by discussing their methods we would be able to cull out the good and apply it to our work, for most of it is something that we have all used for many years and only brought out before the public under a new name; hence they get the cases.

Dr. J. R. Wathen: I think he struck the keynote when he said doing as they do we get their cases. The most of the osteopaths use the Chattanooga vibrator, and as the essayist has said, by giving it speed, etc., they effect a deep massage that would require hours to do by the old hand method. Besides that, they use high frequency electricity, and by this means they surcharge the patient.

Dr. Gaddie, at the afternoon session, expressed to the Society the kindest and best wishes of Dr. Jerome Smith, of Hodgenville, who was the first President of the Society, and who was at the present time lying on what is no doubt his last bed of affliction.

The response on behalf of the Society was delivered by Dr. W. H. Wathen, who in eloquent terms expressed the high esteem in which Dr. Smith was held by the Society both as a man and as a professional brother, and that this esteem was not limited to the Muldraugh Hill Society alone, but was felt by every doctor in the State.

The Secretary was instructed to convey the best wishes of the Society to Dr. Smith, and to express to him our earnest desire that he may recover and be permitted to be with us again.

BOOKS RECEIVED.

A Handbook of Pathological Anatomy and Histology, with an Introductory Section on Post-Mortem Examinations and the Methods of Preserving and Examining Diseased Tissues, by Francis Delafield, M.D., LL.D. and T. Mitchell Prudden, M.D., LL.D. Seventh Edition, with thirteen full-page plates and 545 illustrations in the Text in Blank and Colors. Price, \$5.00 net. New York: Wm. Wood & Co, 1904.

Clinical Urinology, by Alfred C. Croftan, Professor of Medicine, Chicago Post-Graduate Medical College and Hospital; Physician in Chief to St. Mary's Hospital; Pathologist to St. Luke's Hospital. Illustrated. Price, \$2.50 net. New York: Wm. Wood & Co., 1904.

The Surgery of the Heart and Lungs. A History and Resume of Surgical Conditions Found Therein, and Experimental and Clinical Research in Man and Lower Animals, with Reference to Pneumonotomy, Pneumonectomy and Bronchotomy, and Cardiotomy and Cardiorrhaphy, by Benjamin Merrill Ricketts, Ph.B., M.D. New York: The Grafton Press, 1904.

The Theory and Practice of Infant Feeding, with Notes on Developement, by Edwin Dwight Chapin, A. M., M. D. Second Revised Edition. Illustrated. New York: Wm. Wood & Co., 1904.

Taylor on Genito-Urinary and Venereal Diseases and Syphilis. A Practical Treatise for Students and Practitioners, by Robert W. Taylor, A.M., M.D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York. New (3d) Edition. Revised and enlarged. Octavo, 757 pages, with 163 illustrations and 39 plates in colors and monochrome. Cloth, \$5.00; leather, \$6.00; half morocco, \$6.50 net. Philadelphia and New York: Lea Brothers & Co., Publishers, 1904.

Correspondence.

NAGANA, OR SLEEPING SICKNESS.

It is no exaggeration to say that European nations find themselves in the presence of a terrible evil that opposes a powerful barrier to their colonial enterprises in tropical Africa. Nagana is the native name of a malady which up to the present time has been sure death to every one attacked by it, and, unfortunately, it seems to be on the increase. We have all heard of it under the name of "the sleeping sickness," but not until the past few months was it possible for any one outside of equatorial Africa to realize the appalling nature of this newest plague.

Three years ago the disease, which had slowly made its way up the Congo river for some twelve hundred miles, suddenly appeared in Uganda, on the northern shores of Lake Victoria Nyanza. The infected area extends for a distance of 250 miles along the northern borders of the lake and the neighboring islands. About thirty thousand persons have already fallen victims to the disease. The most tragical aspects of the plague are witnessed on Bavuma Island, where a population of 22,000 has dwindled to 8,000 since the dreaded advent of nagana.

The disease has been for the past two years under the daily observation of a corps of medical experts sent there by the co-operation of the British Government and the Royal Society of Physicians and Surgeons. Four reports have been published, but the latest sorrowfully acknowledges that as yet no remedy has been found. The individual who is attacked is doomed.

The distribution of the sleeping sickness is found along a narrow strip of the Atlantic coast, from the Senegal river to Loanda. In this coastal region its very serious phases have never developed. When once it spread inland, following the Congo river for over a thousand miles, its character increased in deadly virulence. Its most predominant feature was the tendency of its victims to sleep nearly all the time, and gradually to grow weaker till they died. Though its main route has been the Congo basin, it has likewise ascended the Mobangi, the Kassai and some other tributaries for a considerable distance. The deaths, both in the French and Belgian Congo, have numbered thousands, and account for the disappearance of many of the native

settlements along the banks of the river. The mortality is notably less at a distance from the waterways.

Sleeping sickness is a variety of cerebro-spinal meningitis, and the two purposes which the experts kept constantly in view were to find, if possible, the cause of the malady and provide a remedy for it. They have brilliantly succeeded in their quest for the cause of the evil, but have not yet found the way to save a single patient.

In July, 1902, these experts were installed in buildings on the north shore of Victoria Nyanza, in the village of Entebbe. These buildings included a hospital, in which a number of patients in all stages of the disease were kept for special observation and treatment. Another building was a laboratory, in which the investigations as to the cause of the disease were carried on. For four months the experts were completely baffled; but one morning Dr Castellani while making a microscopical examination of the cerebro-spinal fluid of a man who had just died, was surprised to find a parasite which is known as trypanosoma. Investigations were at once begun on the tentative hypothesis that trypanosomes, introduced in some mysterious manner into the human system, might be the real cause of nagana. In a few weeks it was found that these parasites existed not only in the cerebro-spinal fluid, but also in the blood of the patients; and it was furthermore proved that until the disease was considerably advanced their presence could not be detected. The truth of the mosquito-malaria theory had already been demonstrated, and the investigators went to work in the light of this discovery. Their theory was that the parasite was transmitted to man by some stinging insect. Their inquiries, therefore, took the direction of a study of the insect life of that region; and they also fixed the exact limits of the territory to which the disease had hitherto been confined.

They soon found that the disease was strictly limited to the area which forms the habitat of one of the varieties of the tsetse fly, or *glossina papalis*. This fly infests the islands of Lake Victoria, its shores, as well as the low lands along the rivers. This coincidence was striking, and special attention was at once given to the supposed cause of nagana. Some perfectly healthy monkeys were selected, those animals being easily procured, easily fed, and easily maintained in good condition. The method adopted was to feed tsetse flies on a sleeping sickness case, and then to place the same cage of flies on the monkeys. It was thus conclusively proved, as a result of

such experiments extending over months, that the fly conveys trypanosomes from sleeping sickness cases to healthy monkeys.

It was further discovered that tsetse flies freshly caught produced nagana when placed on the monkeys. Thus was it proved that the *glossina papalis* was the source of the mysterious plague, the only real cause of the sleeping sickness.

The first sign of the malady is the unusual quietude of the patient. He then shows a disinclination to work, sits about and rests more than usual, while his facial aspect becomes dull, heavy and apathetic. His speech becomes mumbling, slow and thick, and he rarely speaks at all unless he is addressed. A drowsy, lethargic condition then ensues, the patient keeps to his bed nearly all the time, his drowsiness gradually increases, finally passing into a complete state of coma, from which he never emerges. A month or six weeks are usually required for the successive stages of the disease. Sometimes the symptoms are developed more slowly, and life is prolonged for several months, but all eventually die.

The ground that has been won in establishing the cause and nature of this new and terrible plague justify the strong hopes that are now entertained that the diligent efforts now in progress to find a remedy will meet with entire and well deserved success.—*Dublin Correspondent*.

Notices.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended August 11, 1904:

- CLARK, TELIAFERRO. Passed Assistant Surgeon—Granted leave of absence for one month from September 13th. August 5, 1904.
- LUMSDEN, L. L., Passed Assistant Surgeon—Granted leave of absence for four days from July 23, 1904, on account of sickness. August 5, 1904.
- COOK, B. J., Acting Assistant Surgeon—Granted leave of absence for ten days from August 3d. August 10, 1904.
- GAHN, HENRY, Pharmacist—Granted leave of absence for fifteen days from August 15th. August 8, 1904.
- LOUGH, CHAS., Pharmacist—Granted leave of absence for thirty days from August 10th. August 3, 1904.
- HOLSENDORF, E. E., Pharmacist—Granted leave of absence for thirty days from September 1st. August 6, 1904.
- SUER, CARL, Pharmacist—Granted leave of absence for thirty days from August 17th. August 5, 1904.

RESIGNATION.

- FERINAND, G. O., Pharmacist—Resigned to take effect August 15, 1904. August 9, 1904.

PATENTS.

JULY 19, 1904.

- 765,361. Device for Eradicating Facial Wrinkles, Wm. B. Hargrave, Colfax, Wash.
- 765,389. Operating Table, Florus F. Lawrence, Columbus, Ohio.
- 765,469. Shade for X-ray Tubes.
- 765,470. Electric Therapeutic Apparatus, Robt. Friedlander, Chicago, Ill.
- 765,538. Pocket Pill Safe, John A. Acker, St. Louis, Mo.

JULY 26, 1904.

- 765,690. Apparatus for Producing Gyrotory Magnet Lines of Force for Therapeutic Purposes, Reinhold Trub, Hombrechlikod, near Zurich, Switzerland.
- 765,733. Bandage Rest, Wm. S. Hubbard, New York, N. Y.
- 765,793. Surgical Bridge, John F. Ruckel, Chicago, Ill.
- 765,875. Baby Walker or Perambulator, Richard K. Blake, Havana, Kan.
- 765,943. Process of Making a Substitute for Cod Liver Oil, Karl F. Tollner, Bremen, Germany.
- 765,887. Otoscope, Peter T. Geyerman, Brewster, Minn.
- 765,121. Holder for Serums, Frederick K. Stearns, Detroit, Mich.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. — RUSKIN.

Original Articles.

SURGICAL TREATMENT OF ULCER OF THE STOMACH AND DUODENUM.*

BY WILLIAM H. WATHEN, A.M., M.D., LL.D.

Surgeon St. Anthony's Hospital, Louisville City Hospital, and Kentucky School of Medicine Hospital; Fellow of the American Gynecological Society.

Chronic ulcer of the stomach and duodenum, pyloric retention and obstruction, and the early stage of gastric cancer are usually diagnosed chronic dyspepsia, without any conception of the underlying pathologic conditions, the diagnosis and treatment being mainly based upon the chemic and microscopic examination of stomach contents. This failure to appreciate the organic changes in the stomach, which can only be cured by surgical treatment, results in chronic and continued invalidism, and in frequent cancerous invasion in the ulcer base, or the epithelial cells in the scar of a healed ulcer; hence the great relief from suffering, and the prolongation of life by an early diagnosis and timely surgical interference.

In recent exploratory invasions into the upper abdominal cavity by a relatively few surgeons, the diseased condition of the stomach and duodenum have been logically studied and correctly interpreted in their pathologic, diagnostic and therapeutic significance.

The necropsies upon patients dying in the hospitals of this country and in Europe show that about 5 per cent. have active gastric

* Read before the Kentucky State Medical Association, May 18, 1904.

ulcer, or the scar of an old one, and that in 50 per cent. of these there are perigastric adhesions, and often pyloric obstruction; that about 2 per cent. of all deaths are caused by gastric cancer, and that approximately 40 per cent. of all cancers occur in the stomach, but these facts did not benefit humanity until the diseases of the stomach and surrounding structures were studied *sectio in vivo* in surgical treatment.

The laboratory pathologist has done much to enable us to understand the changes that occur in the tissues of the body as a result of disease, but he has not always interpreted for us the significance of these changes in a diagnostic and therapeutic sense, this being left to the surgical clinician. While Moynihan and some other men distinguished in stomach surgery do not record many pre-existing gastric ulcers in gastric cancer, I do not believe their observations are correct, for we find in the operations for gastric cancer by Mayo that 60 per cent. of the cases were subsequent to ulcer. This, I believe, is a low estimate, for there are advanced cases of cancer that have been preceded by ulcer in which all local evidence of the ulcer had disappeared, and the ulcer frequently occurs and exists in chronic form without classical symptoms. It is probable that cancer of the stomach is usually subsequent to ulcer, for as a result of ulcer we may have impaired nutrition and resistance because of scar tissue in the stomach walls, and frequent perigastric adhesions, and pyloric retention and obstruction, which deforms the stomach, interferes with normal motility and gastric drainage, conditions that predispose to cancerous invasion.

Then, if this be true, may we not often prevent gastric cancer by anticipating and preventing or removing conditions favorable to its development?

Fortunately, the results of surgical experience have answered this question, and we may now cure gastric ulcer with its pre-cancerous complications, and prevent further pathologic changes by the establishment of efficient stomach drainage.

We will now consider how we are to obtain the best immediate and subsequent results, and the relations of the physician and the surgeon to the patient in the treatment of the various complications of gastric and duodenal ulcer, hemorrhage, perforation, perigastric adhesions, contractions, pyloric obstruction and cancer, for the symptoms of these sequela direct our attention to the ulcer enabling us to make the diagnosis and apply the correct treatment. We will then briefly study the classification, the etiology, the pathology, the symptomology, the

diagnosis and the prognosis of gastric and duodenal ulcer, with the view of deciding upon the best treatment of the ulcer and the resulting complications and pathologic changes that interfere with the motility and normal functions of the stomach.

The ulcer may be classified as acute, subacute and chronic, large and irregular, small, round and well defined, superficial, deep-seated and perforating, or circumscribed and diffuse erosions; but the chronic ulcer is the result of the acute or subacute ulcer, which has gradually merged into the chronic stage; or the ulcer may have been apparently cured, continuing even for many years without noticeable symptoms, before the chronic ulcer is suspected or diagnosed. Hyperchlorhydria, anemia and traumatism are the three accepted causes of ulcer, but their exact relations as etiologic factors are not clearly defined, and anemia is probably often the result of the loss of blood from the ulcer, for profuse hematemesis in a well nourished person may be the first symptom of the ulcer. As we usually find an excess of hydrochloric acid in acute ulcer, this condition appears to be the initial cause, but we have not learned the underlying conditions that precede and induce this excess. There are evidently unknown causative conditions preceding the hyperchlorhydria that the chemist and bacteriologist, internist and surgeon may finally discover. That hyperchlorhydria is necessary in the development of the ulcer is shown by the fact that duodenal ulcer appears in the upper third of the duodenum above the point where the alkaline secretions of the liver and the pancreas enter the bowel, and that ulceration may appear in the intestine just below its anastomosis to the stomach in gastroenterostomy. The muscular walls of the pyloric antrum are thicker and have a more abundant supply of longitudinal, oblique and circular fibers than are found in the body and fundus, and at the pylorus the strong circular muscle fibers form a sphincter with a valve of mucous membrane. This arrangement of the muscle fibers is necessary, because the physical process of grinding and macerating the food and forcing it into the intestine is mainly confined to the pyloric end, hence we conclude that 75 per cent. of gastric ulcer in this part of the stomach is because of an irritation or traumatism in the mechanics of stomach digestion.

The cardiac end and middle third of the stomach retain the food until it is prepared for intestinal digestion, and then by rhythmic contraction and without injury to the mucosa or walls, force it to the pylorus, which by alternate relaxation and peristaltic contraction conveys it into the duodenum. Even where there is partial pyloric

obstruction the body and fundus will not sustain much traumatism in efforts to get rid of stomach contents, and will by compensatory hypertrophy and dilatation try to meet the existing conditions and perform physiologic functions. But the difficulty in stomach drainage may become so great as to impair the muscular tonus of the gastric walls, thereby causing prolonged retention of food, finally resulting in a continuous residuum, which by infection and fermentation generates poisonous products, alike injurious to the tissues of the stomach and to the vital functions of the body. In this condition secondary gastric ulcer may develop in the fundus long after the pyloric ulcer has become chronic, or possibly healed, but such development must be comparatively rare.

Were the renal complications in gastric ulcer surgical treatment would seldom be indicated, and the ulcer would usually be self-limited, the patient remaining under the direction of the internist. In acute ulcer the dangerous complications are hemorrhage and perforation, the former of which though often profuse, with alarming symptoms, may never recur, and if it does, the hemorrhage will usually be less profuse and gradually cease. The hemorrhage or repeated hemorrhage may occur with or without premonition, the blood being vomited and passed in the feces.

Surgical treatment is indicated in hematemesis where the persistence of hemorrhage is endangering the life of the patient, and should then be limited to a gastroenterostomy, for with a stomach freely drained hemorrhage will not usually continue. As the perforation in acute gastric and duodenal ulcer is sudden and of large size, admitting of free transmission of stomach contents into the peritoneal cavity, prompt surgical treatment is alone indicated to save the life of the patient.

The perforation causes profound shock and intense pain, with great rigidity of the recti muscles, such as we see in acute appendicitis, and when the pain and shock are relieved by morphia the rigidity remains. We may have similar symptoms in gall bladder rupture and acute pancreatitis, but as an exploration is necessary in such cases a differential diagnosis is not essential. The operation for perforation must be prompt and quickly performed, the poured-out contents in the upper abdominal cavity gently sponged away, and if the abdominal cavity is infected it should be drained by the introduction of a tube into the pouch of Douglas, or in the male into the vesico-rectal pouch through an opening above the pubes. Too much sponging and irrigation by saline solutions can be of little immediate value, and may so impair

peritoneal resistance as to encourage the development of pathogenic bacteria. The perforation may be closed by one or more catgut sutures introduced through the entire thickness of the wall, over which should be carefully applied Lembert sutures, so as to infold the tissues over the ulcer.

Duodenal ulcer is large, and perforation is relatively more frequent than in gastric ulcer, and seems to be mainly confined to adult males, but I believe it will be found in the female more frequently than is indicated in the experience of Mayo, who had but seven perforations in females in thirty-nine cases. The chronic ulcer is found in about 10 per cent. of the cases in the duodenum, and in 90 per cent. in the stomach. Because of contiguity of structure the symptoms of duodenal ulcer, chronic pancreatitis, pyloric obstruction and gall stones are nearly identical, hence an error in diagnosis is probable.

The symptoms in acute gastric ulcer are vomiting, pain, tenderness on pressure and hyperchlorhydria but the existence of the ulcer is often not suspected until the blood is seen in the vomit or feces, and the ulcer may pass to the chronic form without any knowledge of its previous existence, or the patient may recover without treatment.

Chronic ulcer is multiple in about 20 per cent. of cases, there being two, several or many ulcers, as shown in 363 necropsies by Brinton, and we may find an ulcer in the posterior wall opposite one in the anterior wall. In Welch's report of 793 cases the ulcer was found as follows: Anterior wall, 96; posterior wall, 235; lesser curvature, 288; pyloric ring, 95; fundus, 28, and 1 in the greater curvature, 27. The ulcer may be found associated in both stomach and duodenum, and it may exist simultaneously in different parts of the stomach.

The relative frequency of chronic gastric ulcer in the two sexes had been variously estimated, but the most reliable statistics show about 60 per cent. in women and 40 per cent. in the men, ulcer being usually a disease of adult life, and but rarely seen in children. In Welch's 793 necropsies, and in Mayo's 300 operated cases, the above percentages are confirmed; while in the 262 necropsies of Berthod, the percentages are as follows: Females 57; males, 49—; (Females, 134 males, 128.)

Fricdler's report of 2,200 necropsies shows 20 per cent. gastric ulcer in women and 1.5 in men, but as this is so contradictory to all reliable statistics, there must be some error.

The complications of chronic ulcer are spasmodic or organic pyloric obstruction, perforation, perigastric adhesions, irregular organic gastric

contractions forming two or more saculi, hemorrhage, sometimes quickly fatal from erosion of a gastric or perigastric vessel, dilatation, acute or chronic pancreatitis and cancerous invasion. Perforation in chronic ulcer and even in subacute ulcer with a small round well defined opening does not cause the dangerous condition we have in the acute ulcer, for the perforation is often quickly closed by a fibrinous plug and inflammatory exudations and adhesions. If the perforation is in the posterior wall there may not be any considerable infiltration of stomach contents, because the peritoneal layers of the small omental bursa lie in apposition, and adhere so quickly that diffuse infection is often prevented. Moynihan believes that there are two perforations in 20 per cent. of cases, and that the one in front often has one in the posterior wall exactly opposite, the latter of which may not be detected in an operation, but may cause subfrenic abscess or acute pancreatitis, demanding drainage anteriorly through a transperitoneal incision, or preferably through an incision in the posterior wall.

The relative frequency of hemorrhage in chronic ulcer is variously estimated at from 20 to 80 per cent., but I can find no reliable statistics. While most ulcers may bleed at some stage of their existence, the quantity may be small, not vomited and not observed in the melena.

There may be no recurrence of hemorrhage for months or for years, the patient believing he is cured of the ulcer, when, with or without premonition, the bleeding becomes copious or even lethal. When the hemorrhage is not copious, but continues at frequent intervals, the patient may finally die of anemia and exhaustion. While in most cases the hemorrhage will cease, as in acute ulcer, without a surgical operation, in some it will not, and then a gastroenterostomy may be performed.

Symptoms of ulcer in the body or fundus of the stomach may be latent until the late occurrence of hemorrhage or perforation; but ulcer in the pylorus may cause painful digestion, tenderness on pressure, hypersecretion, persistent dyspepsia, gas, anemia, prostration, nervousness, gastric atony and gastric tetany, the latter being probably caused by the absorption of the toxins from bacterial growth in the constantly infected stomach residuum, and may be cured by establishing stomach drainage.

The above will indicate that we can not diagnose chronic ulcer, with its multiform complications, by chemic, microscopic and bacteriologic examinations of stomach contents, and that these means are practically worthless unless we carefully consider all the physical changes in stomach motility, drainage and digestion.

While hyperchlorhydria may be present at the beginning and in the early stages of most ulcers, this is not true in the chronic ulcer, in which we may have either hyperchlorhydria, euclorhydria, hypochlorhydria or anachlorhydria, and even in cancer of the stomach there may also be a normal amount, too much, too little, or an absence of hydrochloric acid, the latter indicating that the cancer has involved the glands in the body of the stomach.

We find our greatest difficulty in appreciating the indications for surgical treatment in those cases where there has been no appreciable hemorrhage, no history of perforation, no vomiting, and but little if any pain in digestion or on pressure, and no tumor, the patient having had for many years continuous or interrupted dyspepsia, with loss of flesh and a decided neurotic tendency. The differentiation must be made in these cases between neurasthenia, gastric neuroses, atonic dilatation, with impaired tonus and peristalsis in the muscle fibers of the stomach, which are not benefited by surgery, and those cases with symptoms apparently similar, but with chronic ulcer or its complications. In these cases we may obtain valuable information by the use of the stomach pump, and by distending the empty stomach with air, but often a positive diagnosis can not be made without an exploratory incision. In such cases ulcer, perigastric adhesions, contractions, or occasionally cancer, may be found in the body or fundus of the stomach, but these conditions could not exist in the pylorus without characteristic symptoms. In a recent report of 500 cases of gastric ulcer treated by the internest at the London Hospital 40 per cent. were supposed to be cured, 42 per cent. were not cured, 18 per cent. died, and 211 had previous attacks. The observations of Debove, Remond and Leube indicate a direct mortality of about 25 per cent., and a secondary mortality from complications, cancer, tuberculosis, etc., at about the same, and probably many of the other cases were not cured, some of whom may have died later of ulcer complications.

In the surgical treatment of gastric and duodenal ulcer, a broad experience has convinced us that free stomach drainage is usually all that is indicated except in perforation, and that excision of the ulcer or local applications are often of no value, and greatly increase the mortality. It has also been practically decided that gastroenterostomy in its present state gives the best immediate and subsequent results, and the lowest mortality in benign cases. In gastroenterostomies by Mayo, the mortality is 6 per cent.; in 215 cases by Cœlmy, 5 per cent.;

Robson, in a long series of cases, 3.9 per cent. ; and in 100 consecutive operations by Moynihan, but 2 per cent., and only 6 of his 98 cases were not cured, and of these six three have been greatly improved and the other three are too soon after operation to say what may be the final result. In Czerney's cases there was no *vicious circle*, serious vomiting or obstruction. In most of Mayo's cases the gastroenterostomy was made anteriorly. His mortality and the immediate and subsequent results were not so perfect as in Moynihan's posterior gastroenterostomy of Von Hecker. By this operation, as modified by Von Mikulicz and Czerney, the dangers of the "*circulus viciosus*" are eliminated by attaching the jejunum near its emergence under the meso-colon to the lowest part of the stomach, thus preventing angulation of the bowel. As the greater curvature of the stomach lies below the base of the meso-colon, the jejunum may be anastomosed at a point from two to four inches below this point without disturbing its normal relations or physiologic action, there then being no intestinal loop and no afferent limb to become filled with bile, pancreatic secretions and stomach contents, abnormal contents always present in the *vicious circle*. Moynihan attaches the intestine to the stomach about seven or eight inches below the beginning of the jejunum. This may be done by making an immediate opening connecting the bowel and the stomach, or by using the McGraw ligature. Czerney uses the Murphy button, usually supplemented by a circle of Lembert sutures, while Moynihan and Mikulicz use the suture-only, and Mayo in recent operations uses either the button or suture.

The *vicious circle* may also be usually prevented in anterior gastroenterostomy by making the anastomosis at the lowest part of the stomach, so as to avoid any stomach retention of food or biliary and pancreatic secretions, but this leaves the jejunum, colon and great omentum in an abnormal position, and disturbs the normal physics, and it is probable that the gastro jejunic opening will contract more readily than in the posterior method.

However, we find many good surgeons performing the anterior gastroenterostomy because of the greater simplicity of the operation, and the many immediate excellent results, and in cases where a patient can not resist prolonged anesthesia and operation, it may take precedence over the posterior method, especially in cases where we use the McGraw ligature, which will probably grow in popularity in the anterior operation where an immediate opening is not necessary, for it can be quickly

applied, with the danger of infection minimized, and the opening will probably remain patulous and give free drainage.

While the entero-enterostomies of Wolfler and Jahoulav in anterior anastomoses, and Roux in posterior anastomoses did much to evolve our improved technique, we no longer feel the necessity of connecting the proximal and distal end of the jejunum. The operation of Roux is theoretically ideal but practically it is difficult, prolonged and dangerous, and the mortality would be prohibitory were it generally adopted.

In performing the posterior gastroenterostomy, it is better to suture the stomach to the margins of the opening in the mesocolon to prevent the possibility of the intestine passing into the small omental bursa and becoming strangulated, as occurred in a fatal case reported by Moynihan.

Anterior gastroenterostomy as an operation of election must very soon become obsolete, and will finally be accepted only in rare cases as an operation of necessity to give temporary relief.

The ideal operation of election must eliminate the intestinal loop, and this can only be done by the posterior method, attaching the jejunum very near its point of origin. The bowel may be incised longitudinally or transversely, but preferably in a longitudinal direction.

Where the condition of the patient will not admit of a prolonged operation, the McGraw ligature may also be used in posterior anastomoses, but a surgeon of experience in the best methods of intestinal suturing may make an incision in the stomach and jejunum and suture the cut edges around the connecting opening in a few minutes.

Posterior gastroenterostomy is now the routine method with Robson, Mikulicz, Kocher, Czerny, Moynihan, Hartman, Kummell, Von Eiselsberg, Korte, Witzel and many other men who do abdominal surgery.

We might theoretically prefer drainage at the pyloric end of the stomach by some of the various operations devised, but the results are not in harmony with the theory, and in all these operations, except Finney's gastropyloroduodenostomy, gastroduodenostomy is practically obsolete.

While gastroenterostomy is indicated in hour-glass contraction of the stomach, the operation will not be successful unless the pyloric sacculus is very small, but it should be preceded by a gastro-

plasty, or a gastro-gastrostomy, and then the attachment of the intestine must be made to the pyloric end, otherwise drainage can never be complete, and there will be retained in the stomach decomposed and foul-smelling food and secretion.

In all operations for gastric contractions the stomach should be carefully examined to its fundus, for we may have a sacculus at the dome, and then drainage from the pyloric sacculus would not greatly, if at all, benefit the patient.

As these contractions are sometimes caused by perigastric fibrous bands, the deformity may be removed by dividing them, or dissecting them off. Perigastric adhesions may change the normal relation and physiologic action of the stomach, duodenum, gall bladder and bile ducts, and should be separated or divided as completely as possible, so as to establish an approximately correct relation. While the separated adhesions may possibly reform, they will not do so to the same extent, nor will the new adhesions as greatly interfere with the physics of these organs.

Pain and vomiting and the perception of a tumor in the stomach are frequent symptoms in gastric cancer, Mayo Robson's statistics showing pain in 86.6 per cent., vomiting in 85.3 per cent., and tumor in 76.6 per cent. of cases, and Fenwick says a tumor may be palpated in the body of the stomach in 81 per cent. of cases, in the pylorus in 71 per cent., and in the fundus in 55 per cent. While gastric ulcer may cause rigidity of the recti muscles, this is not true of cancer, and if the tumor is not situated too high, or can be forced down by full inspiration, it may be palpated with comparative ease. A well defined tumor of the stomach does **not** always indicate malignancy, for patients with tumors at or near the pylorus have been permanently relieved of symptoms by gastroenterostomy, and tumors attached to the abdominal wall with infiltration have disappeared when adhesions were separated, though a diagnosis of cancer had been made before and after the operation. The surface of a benign gastric tumor is regular and even, but the malignant tumor is irregular and nodular. Gastroenterostomy or the removal of adhesions never cures cancer, but may cure patients supposed to be suffering with cancer, who may otherwise have finally died of this disease. This error in diagnosis may explain the false assumption that gastric cancer is relatively increasing in frequency, for many of these patients having died without operation were recorded cancer, no necropsy being made.

Osler recommends that an exploratory operation should be more

frequently advised by the physician, and his opinion on this subject is entitled to much consideration, because of the extent and excellence of his work in cancer of the stomach.

No operation for cancer of the stomach, except pylorotomy or partial gastrectomy, can give but temporary relief, and we can not offer these patients any hope of permanent relief by the radical operations unless they be performed in the earliest stages of the disease. In cases where the radical operation is not indicated, the patients may be relieved of much pain and life prolonged by a gastroenterostomy or a gastrotomy, there being practically no mortality from these operations.

In view of the fact that gastroenterostomy does not always give satisfactory ultimate results, and may also leave a pathologic condition in the pylorus favorable to the development of cancer, we may get better permanent results in properly selected cases by following the suggestion of Rodman, and remove the pylorus, including the part of the gastrohepatic and gastrocolic omenta most abundantly supplied with lymphatics. After the gastric and pyloric openings are sutured, a gastroenterostomy must be performed by attaching the jejunum at the lowest point of the remaining part of the stomach. Rodman's operation has been endorsed by Moynihan, Mikulicz and Mayo, and the mortality may finally not exceed 5 to 10 per cent.

LEWISVILLE, K. C.

ATROPHIC OR RUDIMENTARY KIDNEY.

BY BYRON ROBINSON, M.D.

Atrophic or rudimentary kidney is a condition in which one kidney is either rudimentary, non-developed, or has become atrophic from disease. Atrophic or rudimentary kidney may be congenital or acquired. To the surgeon rudimentary or atrophic kidney are practically the same in effects, for neither the rudimentary nor atrophic kidney will sustain life. By atrophic or rudimentary kidney I shall designate that a part of the kidney and ureter may persist and may present functional remnants or not. The remnants may be but fibrous tissue, adipose tissue, or pathologic state of the elements of the renal-ureteral apparatus. At times it is difficult to decide whether a kidney is atrophic from disease or rudimentary from non-development. If no trace of vasa renalia, renal tissue or ureter be found the kidney is congenitally absent, and we have practically an unsymmetrical kidney.

In atrophic or rudimentary kidney practically a part or the whole of the ureter is present. As a typical example of atrophic or rudimentary kidney, in addition to my own here presented, I shall report one from the *Edinburgh Medical Journal* of July, 1874, from the pen of Dr. M. Watson. The autopsy was on a male subject to epileptic convulsions. The right kidney was the size of a large bean, an inch and a half in length and located in the normal position. Macroscopically, no distinction on section of medullary and cortical substance presented. Microscopically, it presented fibrous tissue, with occasional isolated dilated uriniferous tubules, occupied with cells and connected with malpighian capsules. The ureter, a fibrous impervious cord, adjacent to the kidney, but pervious adjacent to the bladder, but had no connection with the kidney. There existed no passage for the secretion of this renal remnant. The left kidney, larger than usual, weighed $9\frac{1}{2}$ ounces.

FREQUENCY OF ATROPHIC AND RUDIMENTARY KIDNEY.

I examined almost every volume of the London Pathologic Transactions, and found eleven cases of renal atrophy noted. Some six of the ureters of these subjects of atrophic kidney are involved, but no note is made of the other five ureters. Four of the ureters were impervious. Two cases of congenital or rudimentary kidney are named, in one of which no traces of a ureter could be found; the base of the trigone was observed absent on the side of the absent ureter. In these excellent volumes of recorded renal pathology the characteristics or distinctions between atrophic (nephritic) kidney and rudimentary (congenital kidney) are not marked, and perhaps it might be said are impracticable. The smallest atrophic kidney weighed one drachm with an impervious ureter. Some others weighed 3, 5, 6 drachms respectively—organs entirely inadequate to sustain life. Some of the opposite of these atrophic kidneys weighed 8, 12, $10\frac{1}{2}$ and $13\frac{1}{4}$ ounces—organs compensatory hypertrophied, and amply able to sustain life. In one case of congenital (rudimentary) kidney the kidney was three-fourths of an inch long.

ETIOLOGY OF ATROPHIC RUDIMENTARY KIDNEY.

The etiology of atrophic or rudimentary kidney may be inflammatory conditions of the wolffian body causing adhesive constricting bands or embolus, limiting nourishment, compression of organs, defective development of the wolffian body. The metanephritic duct may be defective in development, the renal artery may be defective in lumen, or obstructed by embolus, or its wall thickened. Obstruction

of the ureter by calculus (as I proved by ligation of ureter in a dog) may occur. Nephritis may induce atrophy. Nephritis is the main cause given by the London Pathological Transactions in thirteen cases of atrophic kidney. The second cause, which is distinctly mentioned three times, is obstruction of the ureter by calculus. Once the renal artery presented an old aneurysm, and its distal branches were markedly narrow. The compromization of the lumen of the renal vessels from hypertrophic was mentioned several times. Location of the atrophic or rudimentary kidney may be (*a*), in the normal renal region; (*b*), on the left iliac artery; (*c*), on the brim of the pelvis.

DIMENSIONS AND WEIGHT OF THE ATROPHIC OR RUDIMENTARY KIDNEY.

By a study of the fifty volumes of Transactions of the London Pathologic Society extending over fifty years, Henry Morris and the literature, it is evident that rudimentary or atrophic kidney varies extensively in dimensions, weight and functional capacity. The weight of the rudimentary or atrophic organ is mentioned the most frequently. One atrophic kidney weighed one drachm, another three drachms, still another five drachms, yet others weighed six, ten and twelve drachms—organs totally inadequate to sustain life. In two cases where it was reported as distinctly a congenital kidney "one was a small mass of kidney substance." To illustrate that the opposite kidney was hypertrophied it may be well to place in view the reported weights of the two kidneys. The following are a few examples: 8 drachms—8½ ounces; 5 drachms—other hypertrophied; 16 drachms—7 ounces; 6 drachms—12 ounces; 6 drachms—1¼ ounces; 12 drachms—10½ ounces; 3 drachms—2¼ ounces; 3 drachms—1¼ ounces; less than 8 drachms—2½ ounces.

The above records demonstrate the extensive variations of the atrophic or rudimentary kidney. Both kidneys may be atrophic, as in the case of Jemmett's report, where the left kidney weighed less than eight drachms, while the opposite kidney weighed 2½ ounces. The dimensions are less mentioned than the weight; however, two cases are reported as one was 2 inches in length and one was 4 inch in length. The appearance of the atrophic or rudimentary kidney is also varied. It may appear as a mass of fatty or fibrous tissue, or solid white body. It may be cystic dilated with fluid or present tubulations. Microscopically, the mass may present renal elements, irregularly dilated with uniferous tubules and glomeruli. One case is reported with two renal pyramids only. The remnant of the renal

mass is generally located in the usual renal regions; however, it may be dislocated. Sutherland, Edington and Northup report renal remnants as lying on the promontory of the sacrum or iliac artery.

The ureter in atrophic or rudimentary kidney is very variable, according to reports. It may be normal, impervious or a fibrous cord. It may be pervious throughout its whole extent, with a limited lumen. The ureter may be pervious or closed at either proximal or distal end. Part of the ureter may have disappeared. It may present no communication with bladder or kidney. In the diagnosis the state of the ureter is of vital importance as revealing the functional renal capacity.

IS THE ATROPHY CONGENITAL OR CAUSED BY DISEASE?

If one witnesses a few hundred autopsies it will be plainly evident that it is difficult to decide whether a kidney is congenitally small or whether it assumed the contracted condition from disease. In reading the fifty volumes of the Transactions of the London Pathologic Society, it is evident that the physicians with the specimens of atrophic kidney before them were frequently in doubt whether it was congenital or acquired. The pathologist will sometimes find it difficult to determine whether the small-sized utero-renal apparatus be congenital, non-developed, or whether it be acquired disease. For the clinician atrophic or congenitally non-developed kidney are practically the same in effect and prognosis. The defective, contracted uretero-renal apparatus will not sustain life. In long continued chronic interstitial nephritis the both kidneys will weigh less than one normal kidney. Obstruction of the ureter by calculus, embolus of the renal artery, stricture of the urethra will end in atrophic kidney. I ligated the ureters of the dog, and in about two months subsequently killed the dog, and found the kidney with the corresponding ligated ureter about the size of the tip of the thumb. The ligated ureter proximal to the ligature was not dilated in proportion to the atrophy of the kidney.

THE DIAGNOSIS OF ATROPHIC OR RUDIMENTARY KIDNEY.

Clinical data affords no aid. Inspection is negative. Palpation is unreliable. The X-ray may afford some clue in development of the palate by the absence of symmetry in the renal contour. The X-rayist should be a physician, an anatomist, and hence be able to announce to the clinician all clues in plate development. Urinalysis is practically valueless. Percussion presents unreliable data. Cystoscopy is a reliable guide. It affords a definite view of the distal ureteral orifices announcing whether they functionate or are pathologic. The cystoscope

demonstrates the symmetry of the trigone as well as distortion. It demonstrates the manifold presentation of the distal ureteral orifice, which suggests many conditions of the rino-urethral apparatus.

Ureteral catheterization offers excellent aid. It demonstrates the permeability of the ureter, and the functional capacity of the renal organ—both essential factors. It locates the existing renal organ. Exploratory incision is the final resort in rudimentary or atrophic kidney, the ureteral catheterization indicating on which side the functioning kidney is located. Ureteral catheterization and cysto-urethroscopy should suggest whether the existing uretero-renal apparatus be a tumor or a compensatory hypertrophied organ. In renal defects exploratory incision and excision should be exercised with precaution. The prognosis of atrophic or rudimentary kidney is unfavorable, if the limited renal parenchyma is continually at maximum functional activity, and the addition of extra exertion or disease may overstrain the small organ, causing albuminuria ending in interstitial or parenchymatous nephritis.



FIG. 1. Photograph of an Atrophic Kidney.

The left kidney is rudimentary, the right is normal.

emitted from the aorta. The left ureter is shown in its entirety, the right is partially obstructed by the bladder. The photograph shows aorta in the middle. The left and rudimentary kidney is seen to have two vessels passing to it, one of them coming from the aorta. The left ureter is seen in its entirety. The lower part of the right can not be seen, as the bladder has been twisted. (From the Pathologic Museum of Rush Medical College, through the courtesy of Professor E. R. LeCount.)

CHICAGO, ILL.

CONSTIPATION.*

BY W. T. MCKINNEY, M.D.

It is so fully appreciated that this subject, of so much importance both to patient and physician, can not be more than very briefly and superficially recounted in the short time allotted to the reading of papers before this Society. Therefore no attempt is made to minutely detail either cause, symptoms or treatment, but to treat each in the more gross clinical aspect, yet with sufficient detail to point out the chief cause and to give the essential principles necessary to a successful treatment, because I am convinced no drugs, nor drugs are specifics, and each and every case holds something in common with every other case, hence there must be a common treatment for this trouble. Nor do I consider constipation from a surgical standpoint, leaving that to the specialist on rectal diseases, whose experience both from training and observation qualify him only as competent to attend to the trouble at that particular end.

First, be it understood that constipation is defined as sluggish or imperfect passage of feces through the tract, the degree depending upon the amount and duration of the more or less retension of this fecal mass. Second, that this fecal matter is composed of the undigested residue of the food in an admixture with the normal secretions and debris of the tract, the latter being no small amount, as is evidenced in disease when no nourishment is given from which a residue could be expected.

Some of the causes of constipation are improper food, improper amount of food, and the improper chemical action on the food during its passage through the tract.

What would be a nourishing food to one person could not be

* Read before the Louisville Medical and Surgical Society, August 15, 1904.

tolerated by another, the taste or after affects of eating same being such that it would be refused. Yet in general, what is good and proper food for one person is acceptable and nutritious to all, and *vice versa*. Circumstances and individual preference for some kinds of food often cause people to eat to excess of such, with a corresponding manifestation of this excess, and likewise a showing of the want of other kinds, the eating of which had been neglected. This is often and easily done, as only a certain bulk of food can be taken, and if the necessary variety is not observed there are exhibited, as above stated, the symptoms of excess and lack. The system can only what nourishment from food that it contains. The improper amount of food can be considered from the standpoint of either too much or too little.

In the process of metabolism at least sufficient food must be taken to replace waste and repair; over this amount is more or less, depending on the kind and amount, a draft on the energy of the system, and by working the economy over time, and using up the secretions, brings about further waste and utter fatigue of the secretions, hence a resulting inability to digest food and a consequent constipation.

Too little food to supply waste and repair of course brings about an impoverished state. There is a loss of muscle tone, nerve force and blood discrepancies. Hence again a resulting inability to digest food and consequent constipation.

The improper action upon the food during its passage through the tract depends largely upon the condition of the tract, which we have seen can be brought about by too little or an excess amount of food. Again, any pathological condition that causes a loss of nerve force, muscular tone or disturbance in the character of the blood and secretions, must necessarily, sooner or later, cause an insufficient and improper handling of the food by the alimentary tract.

Food being absolutely essential to the normal condition of the body, and some error in the food or its handling being the cause for constipation, it is readily assumed that the cause for constipation is a dietary one, unless pathological conditions exist and are the cause.

The symptoms of constipation are both objective and subjective, yet are such in individual cases that no set symptoms can be laid down, each set of symptoms while unmistakable, yet belonging to particular causes, and responding to only the proper treatment.

The treatment of constipation will vary with the individual practitioner, depending upon his knowledge of the physiology of the digestive tract. In this, possibly more than in any other trouble, is it

necessary to have the co-operation of the patient. A full explanation of the chemistry of digestion to an intelligent patient almost assures you success.

The first and essential step in the treatment is to revise the diet list. Many patients will tell you that they pass unchanged articles of diet, yet persist in eating them under the mistaken notion that such food is wholesome. Variety in food should be encouraged, and at least enough vegetables should be eaten to form residue, patients should be taught that while meats are nutritious they leave a small amount of residue. As to quantity, more trouble will be experienced in getting patients to eat enough than to control them from eating too much. It is rather the quality and the preparation of the food that causes trouble.

The administration of liquids should have the closest attention. Nature provided gastric juices in the proper quantity and the proper strength, and while liquids properly taken help to maintain this normal equilibrium, yet if improperly taken are often largely accountable for the resulting digestive disturbances.

Liquids should be taken not closer than one-half hour before meals nor one hour after meals. By the observance of this rule the gastric juices are not diluted during and just after meals, when they have their task of digestion to perform. Water, which is the best liquid to drink, is always craved one or two hours after a meal taken without liquids, and at that time it is most useful, as it assists in the movement of the properly digested mass into the intestines.

Food taken with little or no fluids allows, in fact necessarily compels better mastication, and obtains the benefit of ptyalin digestion to the food, of which it is of course robbed if every mouthful is washed down with liquid. Again, if food is to be taken dry, coffee, tea, cocoa and chocolate will be dispensed with, and their injurious effect lost. Between meals much water should be drunk, every patient should be required to drink at least one-half gallon daily.

The above procedure will maintain perfect digestion in an otherwise healthy stomach, and also its strict observance will aid to bring about a normal condition in the stomach that has been required to handle an excess of liquids at meal times.

In the treatment of constipation, when indigestion is the cause, it is too often the stomach is treated when the gut is at fault. If the food is sufficiently masticated and the juices not too much diluted, no further attention to the stomach is usually required, and, too, there will be little or no disorder of the intestinal function, but if food

passes into the intestines improperly prepared their function is impaired, and sooner or later constipation must ensue. Therefore, when digestants are given, such should be selected as will operate in the intestines, or at least must be added to those known to be only effective in the stomach. We may have imperfect gut digestion and perfect stomatic digestion, the result of insufficient secretions. This is generally remedied by the injection of sufficient water between meals.

To detail the drugs used and beneficial in the treatment of constipation would be entirely out of place; suffice it to say those used and results obtained will depend upon the diagnosis of cause.

If a digestant alone is needed we have a variety of good ones, both for the stomach and intestines.

If motor tone and vascularity is needed, strychnine is possibly our best remedy.

If secretions are to be increased, plenty of water between meals and the mineral acids after meals will give results sought.

In the matter of laxatives those that stimulate secretions in the entire tract should be selected.

I think it a wise practice to have patients take a weekly saline laxative. This overcomes a sluggish bowel and improves assimilation.

Hand massage, following the normal direction of the fecal mass, is very beneficial.

Punctuality as to time of stool is productive of much good, yet it should be practiced intelligently. Going to stool at a certain time is not all that is required. Patients should be taught to dwell in thought upon the act say from five to ten minutes before the time. This alone has been the means of largely increasing the value of an appointed time for stool.

The postponement of stool to a more convenient time can not be too severely condemned. The majority of observers think that the time for stool should be one when thoughts of other affairs should be excluded.

The patient should be taught to relax the muscles concerned in the act. There should be no strain, which only tends to contraction of the muscles and hinders the passage.

It should ever be borne in mind that the agents used in the treatment of constipation are for the purpose of assisting nature to perform a normal function, and never for the purpose of having these agents do the work themselves. More attention should be paid to cause and its correction than to assisting digestion to combat the cause.

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"*NEC TENUI PENNÂ.*"

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

In this issue is a very exemplary discussion of what a body of physicians will say about a cone on which to administer an anesthetic. It is believed that a gas (nitrous oxide) will quickly put a patient under, thereby lessening nausea and other unpleasantness, and avoiding the excitement stage. Another clique will like the simple Schimmelbusch inhaler, and with an ordinarily healthy patient ether or chloroform can be gradually dropped on the cone until the patient is swept gradually under by the gradually increasing strength of the anesthetic wave, and as we have the time to devote to it why not this method? Surely, if a patient does badly the ominous signs show themselves, and we can see and correct the cause before the danger is too apparent. A 100 grm. can of ether by the Witzel drop method can keep the majority of cases under one hour on this open cone. If a little will do, why so much?

EDITORIAL NOTES.

**EXAMINATIONS OF THE INDIANA STATE BOARD OF
MEDICAL EXAMINATION AND REGISTRATION.**

The Indiana State Board of Medical Examination and Registration met at Indianapolis on July 12-14, and examined 118 applicants for certificates to practice medicine. These were from colleges situated in all the Central, Northern and Eastern States, including the Kentucky School of Medicine, Bellevue, Columbia, Jefferson, Northwestern, Rush, University of Michigan, etc. While the examinations were severe, they were in the main practical, and indicate that the Board is trying to do even-handed justice to all students and all schools.

As evidence of the fact that the claim of some of our medical schools connected with large universities that independent schools that have no university endowment are not doing good work is an error, we would call attention to the following: Of the nine applicants from the Kentucky School of Medicine, there was no failure, and their general average was about 10 per cent. above the required 75 per cent., no one getting an average as low as 80 per cent. There were failures from Rush Medical College, Jefferson Medical College, Medical College of Indiana, Hospital College of Medicine, Kentucky University and University of Louisville.

We congratulate the board upon the excellence of the work it is doing, and bespeak the hearty co-operation of all honorable medical schools.

Society Proceedings.

LOUISVILLE MEDICAL AND SURGICAL SOCIETY.

EXHIBITIONS OF PATHOLOGICAL SPECIMENS AND NEW INSTRUMENTS, WITH DISCUSSION.

Dr. Richardson: Dr. McKinney has asked me to show you this apparatus, known as the Bennett Ether Inhaler. It has been used for a number of years with success, to avoid the danger of the primary stage and to substitute for that stage nitrous oxide gas. It may appear complicated, but after you have used it for awhile the complication is slight and the advantages are many.

You can switch directly from the gas to the ether without removing the cone from the patient's face. Of course, if you remove it, and the patient gets a single breath of air he would come from under its influence, and struggle under the application of the ether. Wood states that gas has been used in four hundred and seventy-five thousand cases within the last ten years.

To begin with, you just place your gas right in the gas bag. It usually takes two or two and a half of these bags full to place your patient so that he can stand the ether being turned on, and by turning this little switch he can breathe out of this bag into the air. After he is partially under the gas it is better to breathe back and forth into the gas bag. After he is fully under it you switch to your ether, which is held in this compartment. You can get the patient fully under in five or six minutes. There is absolutely no danger. After he is under the gas there is no resistance at all. The respiration changes. With two and a half ounces of ether you can keep them under for an hour. After you get them under the ether it is customary to switch this back here, and the patient can breathe ether or fresh air, as you desire.

Dr. Jenkins: I do not hardly believe, from the complicated nature of the apparatus and from the inherent fear that seems to exist in the minds of physicians and operators of carbonic acid gas, that this method is entirely likely to take the place of the old time method. It is only to be used in the primary stage.

Dr. Speidel: I thank Dr. Richardson for bringing the instrument to our notice. I believe with Dr. Jenkins that it will not replace the

other methods. I have been able to get the patients over the primary stage by the drop method, or the method of holding the cone away from the face and gradually bringing it nearer, until it is brought down over the face, and the chloroform can be continued or we can change to ether.

Dr. Guest: I do not feel competent to speak of the value of this apparatus, as I have never seen it used but once. I am not in favor of gas administration in minor operations. I have never been favorably impressed in the twelve or fifteen cases I have seen. In the case in which I have seen this apparatus used, I was invited by a gentleman who has used it most, to demonstrate fully to me that it was the best method. In this case it took a trial of about ten minutes; the patient became cyanotic, and he never could be gotten to the point to turn on the ether. It had to be stopped, and the man was given chloroform.

Dr. McKinney: I know nothing of the relative merits of this machine, but it appears to me that the fact that we have an instrument of this kind is an evidence that there is something of value in all of these methods. The main objections are against its complicated mechanism. It does look a little complicated, especially to those who are accustomed to the old methods, still I believe where there is a necessity for something of this kind it answers the purpose.

Dr. Witherspoon: One point about it that I would like to ask the doctor is how he regulates the amount of gas that goes into the second bag and the amount of carbonic acid gas that has been exhaled?

Dr. Richardson: By opening the second bag.

Dr. Falconer: The objection that I have to offer is that it seems too much complicated for the average man that gives anesthetics. It takes a great deal of practice for a man to get them under with that apparatus, and by the time he switches around the patient will be out. I much prefer the old method.

Dr. Hibbitt: If we can get our patients under anesthetic in six minutes with this apparatus I see no reason why we should not use it, when we consider that gas is not dangerous, and it relieves the patient's struggles in the primary stage. It would appeal to a greater number if it were not so complicated. The second bag does not strike me favorably. When it comes to the expense of an anesthetic we should not consider it. The principal idea is the smallest amount of the anesthetic with the greatest amount of air.

Dr. Reesor: From the statistics Dr. Richardson has quoted the results of the use of the apparatus are very good. The question is my

mind is this: He claims that he puts enough ether in this repository here to carry the patient along for twenty-five minutes; how does it govern the amount? If we put enough ether in the cone to carry the patient along that length of time, how does he know when he has got enough to carry him so far that he can not resuscitate him? To put enough ether in this repository to carry him along this length of time is too dangerous to be looked upon with favor. It is too much complicated to watch the patient's pupils, respiration, pulse and all. While it may be all right, and I hope it is, as Dr. Falconer stated, I am much in favor of the old methods.

Dr. Richardson: I expected to find this objection to its complicated structure. It is not as complicated as it appears after you have used it. I am sorry for Dr. Guest's experience. I have given gas in one hundred and sixty-four cases, and I only had trouble in one case. The man was drunk at the time, and we failed to get him under the gas at all. In answer to Dr. Reesor, you can anesthetise a patient with ether with that cone just as in the other cones. You will have to watch the pulse and breathing just the same as in other methods.

Dr. Coleman: I have here to present to the Society a specimen which I am sure is quite unique. I shall present it first, and afterwards give a history of the case. I would like for you to see the specimen, and decide for yourselves what it is. It has been in alcohol four days. It came from the rectum.

This man, aged thirty-five, called to see me about ten weeks ago. At the time there were evidences of ischio-rectal abscess. After the use of hot applications this condition subsided, and in ten days he returned to work. He came to me two or three weeks afterward with the ordinary and classical symptoms of typhoid fever. He was sent home, and put on anti-malarial treatment, and five or six days later developed typhoid fever. He had the classical symptoms except the rose-colored spots; his temperature was never above 102° . A very peculiar feature was that there was considerably more diarrhea and tympanites than is ordinarily seen in typhoid fever. The diarrhea persisted from the end of the first week to the end of the third week. After his temperature had been normal for three days, he having the appearance of a typhoid patient, I was sent for hurriedly and was told that the man's bowel had prolapsed. I found this protruding from the rectum. It was a rotten mass, and I decided it should be removed and clipped it off. That was six days ago. The patient seemed to be recovering from typhoid fever, the tongue was clearing off, and the distension and

tympanites had disappeared under the local application of turpentine stoupes. I treated the patient on the expectant plan, and considered his condition excellent. At a subsequent visit I found more of the mass protruding, and I took hold of it and pulled it out; it seemed to come loose.

The question is, what is this? Did the man have typhoid fever? Is it a section of the bowel, and if so, where did it come from? I would like to ask this. My opinion is that it was an intussusception, but we did not have the symptoms. Severe pain, followed by vomiting and constipation, with tympanites, did not occur in this case. There was no pain, vomiting or constipation, but when this mass protruded and was removed, I said that it must be such. We did not have the constipation, as is most necessary in intussusception. The history is that intussusception may occur, and an inflammation and infiltration take place between the serous surfaces, and upon resolution adhesions occur which would preserve the lumen of the bowel, and the portion involved could slough off and pass out through the rectum. It must be so. The classical symptoms of intussusception were not present. No bleeding followed clipping it off. The temperature range is normal since last Wednesday. The history of intussusception is that when sloughing occurs there is always hemorrhage. There was not in this case.

Dr. Vance: The doctor has reported a very interesting case, and first of all judging from the size of the cast I would say that it came from the large bowel. Intussusception almost always occurs in the small intestine. It is doubtful if this is intussusception, but rather a cast from a severe inflammation of the large intestine. I think it is a cast of the mucous membrane of the large bowel from the inflammatory exudate, of which there has formed and discharged a complete cast. Whether or not that is the case, I should think that the microscope would clear up the point, and show whether we have the four coats of the bowel. It strikes me, from the size of the cast and other things being considered, it must be from the large bowel, and I take it from a severe case of colitis.

Dr. W. A. Jenkins: From an examination of the specimen, I take it to be a case of membranous enteritis. It could not be anything else. From its size and length, and the fact that he cut it off, it could not have gone very far up into the rectum. These cases are not uncommon in the text books nor in the large hospitals. Certainly

cross section would here show whether it could be an intussusception. The chances are very much against it.

Dr. Guest: I do not think there is any question of its being a membranous exfoliation of cast of the large bowel. The question is, what part of the bowel? whether from a colitis or a proctitis? The first one that came away he clipped off. That would show it was in the rectum. The rectum is nine inches long. I do not see how it could possibly be from the descending colon.

Dr. Witherspoon: Now, this is a very interesting case to me. Dr. Vance said that the most common place for sub-involution was in the small intestines. Drs. Gant and Tuttle say that the sigmoid flexure is the most common seat of this trouble, and especially volvulus. We have a great many cases of prolapse of the mucous membrane of the rectum. The cast must be from the rectum or lower portion of the sigmoid.

Dr. Davidson: I am interested to know whether he found the Diazo reaction present when he treated the case for typhoid fever. What was the color of the blood?

Dr. Coleman: The Diazo reaction was not present. It was dark blood.

Dr. Moren: I have seen in aggravated cases of colitis a distinct cast, but it was not near as thick or well organized as this. These casts you meet here are composed of mucus. The thickness is comparatively nothing, and judging from my experience I believe that this came from something other than an ordinary case of mucous colitis.

Dr. B. B. Jenkins: In summing up the data given, I should say it is one of three things: One, prolapse of the mucous membrane or intussusception, the introduction of a foreign body, or third, and most likely, the throwing off of a cast due to an inflammatory process. The only fact that would discount that is its organized condition. It seems to be a perfect cast. Would like for the doctor to get a microscopical examination of it.

Dr. Hibbitt: It appears to be a kind of prolapse of the mucous membrane. The only differentiation I can make is to relate an experience of mine. A patient of mine had discharged some mucoid material which I took to be a cast of the small intestine. I started to bring it to the Society. I had put it in alcohol four or five hours before, and when I reached the meeting it had entirely dissolved.

Dr. Coleman: This was examined very thoroughly with the hands

before putting it in alcohol, and it was as tough as leather almost. So far I would not judge it was a cast of the bowel at all. I still believe it is a section of the bowel—of all the coats, intussusception occurring and the inflammation gluing the two serous surfaces together, this section sloughing off and passing out. I believe I made it plain that I did not attempt to pull the first portion away, and later pulled away all of the balance.

Dr. Vance: I have a specimen of carcinoma of the cervix of the uterus, which I removed to-day from a woman forty-one years of age. She has three grown children, and has been perfectly healthy all her life, both as regards her menstrual function and general health.

About three weeks ago she had a severe hemorrhage, and a doctor was called to see her. He decided to do a curetment. He thought the cervix looked suspicious. I examined it, and it proved to be carcinoma.

I would like to ask the opinion of the Society as to the chances of a permanent cure. I believe that the chances are not very good. Still, the condition has made rapid progress in the last ten days. The doctor asked me then to do the operation, and in that short time the extent of the disease is three or four times what it was at first.

In the operation I went first below and dissected away the diseased tissue, and then went above and removed all the tissue. I could not feel any enlarged glands. No attempt was made to remove the pelvic glands. In the vagina I curetted all the cancer mass which was around the cervix, so as to close it so that in dragging it through the abdomen I would avoid infection.

There was no ulceration of the cervix at all; it is interesting from that point. I want to know from the Society what has been their experience in recurrence.

Dr. Coleman: The only point that occurred to me is this: it is vitally important to make a diagnosis early. I have reached the conclusion that in operations upon the cervix and breasts the results are not satisfactory. Removal of the breast, unless done early, is not satisfactory; it may prolong life for a few months. The removal exceedingly early is preferable, and I believe it will do good in this case.

Dr. Reesor: I must take issue with Dr. Coleman, as I believe the removal of the carcinomatous tissue, even if far advanced, would prolong the life of the patient more than a few months. I recall a case where the left breast was removed. All the glands in the axilla had become involved. The patient was completely relieved on the left

side for a period of three years. It came back in that length of time. The right breast was removed for the same disease, and there has been no recurrence of the carcinoma in that breast.

Dr. Abell: I have little to add. Dr. Vance is to be commended for his use of the microscope to help him make a diagnosis. If we wish to operate early, the period which offers our patients the best chances of recovery, it is the only method by which we can arrive at a diagnosis.

As to the probability of recurrence, of course the earlier the operation the greater the probability it will not recur. But as Dr. Coleman has said, especially in cancer of the cervix, the chances are that it will return. My personal experience has been unsatisfactory. I have one case that has not returned in four years. The other cases were seen too late.

Dr. Vance: Carcinoma, as well as sarcoma, is purely a local process, and believing this to be true, since we can not prove it, it is only a question whether the diagnosis is made soon enough to remove all the cancer tissue. The difficulty in removing all of the carcinoma of the cervix is that the infiltration of the surrounding tissue is so great, the ureters limit the field which can be removed to such a small area that if the case goes on a year it is always hopeless.

Carcinoma of the breast offers a wider field. You can remove all of the tissue down to the ribs, and I believe that should be done in all cases, as well as cleaning out the axilla. Otherwise, I believe as Dr. Coleman, that in advanced cases the operation is only palliative.

DISCUSSION OF PAPER.

Dr. Prather: I want to thank the doctor for his paper, but I wish he had put in his paper that we should impress upon our patients that they ought not to go the drug stores and buy Carter's Liver Pills and many other preparations that are recommended for the cure of constipation. They should be taught that constipation is a symptom of some trouble that should be treated by the physician.

Dr. W. A. Jenkins: This is a timely topic, and its importance as a disease *per se* is hardly overestimated. The disorders of metabolism, and this group is a large one, have associated with them, either directly or indirectly, constipation as a factor.

The cause of the prevalence of constipation is not far to seek. By far the great majority of all cases are due to a departure from the proper methods of living. Take, for example, in the rural districts

where constipation is rare ; life is entirely different, the calls of nature are attended to promptly, exercise is a necessity, large quantities of water are consumed, the diet is wholesome food that stimulates the intestinal tract. If we take the city type of life, we find exactly the opposite conditions. Very little attention is paid to the movements of the bowels ; sometimes it is put off for hours, or until a more convenient time, little water is taken, the meals are eaten hastily, large quantities of wine or other fluids are consumed with the meals, no rest is taken after meals, oftentimes the meals are eaten while thinking of business affairs, no exercise is taken for the greater portion of the day. This picture gives us the difference in the two types of life.

Now, as to treatment : Prophylaxis should receive the greatest part of our consideration and attention. Those individuals who from early youth have formed the habit of having a daily evacuation of the bowels will need nothing more than plain water taken between meals, at bed time, or as long as possible before breakfast, and the taking of exercise. Individuals who have had training along this line very seldom come to see us to be treated for constipation. These things are along the line of prophylaxis are good treatment, and are of much more value than medicine.

As to medicinal methods : Almost everything has been used. All drugs and adjuvants are of secondary importance to the treatment I have mentioned, and he who depends on drugs entirely will be disappointed and the patient also. They are only of secondary consideration, and the attention of the patient must be centered on other measures.

Dr. Speidel : I agree with the doctor that the natural methods should be resorted to. The diet is of primary importance ; it should stimulate the normal peristaltic action of the intestines. Exercise is necessary for this at a specified time after eating. I am glad that he mentioned that the mind should be concentrated on the act at the time. The habit of reading the newspaper at such time interferes with the action of the bowel, and I instruct my patients to refrain from anything of that kind. I find one exercise effectual ; that is stair climbing at a specified time after breakfast. The crouching position assumed in using a vessel is preferable to the erect position assumed on the closet seat.

As to the medication, I give a dose of olive oil at bed time, which very often relieves the condition without resort to other medication.

Dr. Witherspoon : I think the subject has been very thoroughly covered by the gentleman who read the paper, and I do not mean to

discount it ; but another cause that has been omitted is fissure or ulcer. This is a cause from the fact that it causes the patient to put off the act as long as he can possibly do so for fear of the pain that follows. I think that in every case of constipation the rectum should be examined. It is the seat of as much of the trouble or more than any part of the alimentary tract. It seems to me that it is frequently overlooked, and it is a prolific cause of constipation.

I agree with the essayist that you can follow no one line of treatment.

Dr. Moren : The old advice, " Keep the head cool, the feet warm and the bowels open " is hard to follow. There have always been, and there always will be, cases of constipation from early life to old age. In some cases I have tried everything under the sun, and have gotten no effect at all.

One point in regard to etiology has not been mentioned, that is, disorders of the circulation. It is one of the most prolific causes of constipation. If there is a poor circulation in the intestines there is going to be constipation.

In regard to the classification of constipation, we should pay more attention to the spastic and atonic forms. It is a hard point to differentiate between the atonic and the spastic forms. Only yesterday I had a gentleman come into my office suffering from constipation. I gave him a prescription for the bromides, and he tells me that his bowels are moving once each day. There was a Russian physician who gained a reputation by treating constipation with the bromides. We get the sedative effect relieving that spastic condition.

In regard to therapeutics, I believe that electricity is one of the best measures we have. I believe cascara is the best drug.

Dr. Falconer : I believe the treatment could be summed up in the regulation of the diet and the mode of living. I find that constipation is simply a habit of putting off the movement of the bowels, especially in ladies and school children. They put these things off from time to time, and the desire does not return until the next twenty-four hours.

Dr. G. B. Jenkins : I like the definition of constipation given by Tuttle that it is a symptom, and not a disease, and that it consists in a functional alteration or pathologic condition. Constipation is a relative term. Some individuals have an evacuation once a day, some every two or three days, and one case is mentioned in which the bowels moved once in fourteen years. Constipation consists in an abnormal retention for an abnormal length of time. The amount is another thing that is relative. The average amount at each evacuation is six

ounces. This would not hold true of the farmer. He consumes a large quantity of food which must be excreted; he would excrete over six ounces. Thus if we have an individual who eats a small quantity of concentrated food he would evacuate or excrete a smaller amount than six ounces. We should look into this matter, and see which is the factor. Modification of the diet is of primary importance.

Dr. Hibbitt: When we begin to study the causes of constipation I think we should get down to the occupation of the person with the trouble. Take, for instance, the railroad engineer, the fireman or any of the employes in the running departments where they have the desire but can not leave their posts and have a movement of the bowels, but **go ahead without, and the result is constipation.**

There is one point that the essayist made with which I can hardly agree, that is the occasional scrubbing out of the intestinal canal with Rochelle salts, or anything along that line. I believe it is a good plan to clean the intestinal tract thoroughly once or twice a month. I have heard it said that a cigar taken after breakfast is a cure for constipation. **I would like to ask the doctor if that is the case.**

Dr. Taylor: I am sorry that I did not hear the essay. I judge from what has been said that the subject of the paper was constipation. Of course, in an attempt to relieve chronic constipation, close attention should be paid to the diet. The only way to remove chronic constipation is to remove the cause. If it is a fissure cure it, and the constipation is relieved. Sometimes there is a contraction of the bowels; the bromides will give the desired relief. Dr. Spirdel has mentioned olive oil. It is an excellent remedy. The diet of the countryman is composed of green corn, green beans and other vegetables which contain a vegetable oil which keeps the alimentary canal lubricated, and lessens the tendency to constipation and an accumulation of material in the lower bowel.

The administration of stimulants in chronic constipation is a mistake unless there is atonic condition. Salines as a rule should never be used except in cases of acute constipation, limited to once every four or five days, and not used to deplete the secretory apparatus of the tract. A vegetable oil to lubricate the tract is excellent treatment.

Dr. Moren: May I make another point? I am glad to hear the point that Dr. Taylor makes about salts. I am against the administration of the various salts and mineral waters. It is extremely bad practice. Another mistake we make is flushing the bowel—very low

days with various purgatives. If we allow our patients to live on a certain diet day in and day out, the bowel will become accustomed to it and will not respond to it. We should change their diet, and in that way the bowel does not become accustomed to a certain stimulation. If we give drugs, and in awhile we will have to increase them, because the bowel has become accustomed to the stimulation, and it will have to be increased. The country nigger, who lives on corn bread and molasses and bacon, does not suffer from constipation.

A lump or two of white sugar taken before meals influences peristalsis to a great extent.

Dr. McKinney (closing) : Since listening to the discussion I feel that I know a great deal more about the subject than I did when I began to write my paper, and I think that the burden of the opinion has been that no one drug is a specific. As far as the salines go, Dr. Hibbitt agrees with me. I think he intended that it was only an occasional flushing of the sewage of the system. I suppose that Dr. Hibbitt's question was one of jest, and as I do not smoke I can not answer that.

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"NEC TENUI PENNĀ."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. — RUSKIN.

Original Articles.

ACCIDENTAL CORNEAL INFECTIONS.*

BY M. F. COOMES, A.M., M.D., LL.D.

Professor of Physiology, Ophthalmology, Otology, and Laryngology in the Kentucky School of Medicine; a Member of the American Medical Association, the Kentucky State Medical Society, and the Louisville Clinical Society; Ophthalmic Surgeon to the Louisville City Hospital and the Kentucky School of Medicine Hospital; Consulting Ophthalmic Surgeon to Sts. Mary and Elizabeth Hospital; Ophthalmic Surgeon to St. Anthony's Hospital, Etc.

That the cornea becomes infected accidentally can not be questioned, and too frequently the results of the infections are disastrous, inasmuch as the eye is in many cases permanently impaired for visual purposes, and it not infrequently happens that the eyeball is lost.

In the latter part of April, Albert R., the son of a farmer living in Meade county, Ky., near Vine Grove, fourteen years of age, was brought to me by his father.

History: Seven days preceding the visit to my office he said that he had gotten a foreign body in his eye in the dining room directly after his breakfast. The pain following the introduction of the foreign body was very severe, but nothing was thought of that, as it was supposed after a short while he would obtain relief. During the entire

* Author's abstract of the original article read at the meeting of Section Eight, American Medical Association, Chicago, 1903.

day and much of the night he suffered severe pain. The next morning the ocular conjunctiva and lining of the lids were red and swollen to a considerable extent. He sought the advice of an excellent practitioner, who prescribed, alleging that it was simply irritation, probably resulting from the introduction of a lash into the eye which acted as a foreign body. The eye continued to grow worse, and on the fifth or sixth day the cornea perforated and there was hernia of the iris. I saw him on the seventh day after the introduction of the foreign body into the eye. The lids were enormously swollen, and the iris was of course occupying the area of the perforation. His vision only equalled light perception in that eye. The swelling of the lids and the chemosis of the ocular conjunctiva was so great that it was utterly impossible to make an application to the eye, and it was likewise impossible to keep the eye clean, and as there was a considerable flow of pus it was highly important to maintain thorough cleanliness. To give the boy every chance of saving the globe, I did a canthotomy and snipped with the scissors the distended conjunctival sac in a number of places. This relieved the tension, and on the following morning the swelling was much less, and in the course of five days the patient was able to see close objects through the lower portion of the cornea, the upper half being almost ruined by the perforation. At the end of a week after his first visit to me, pus had almost ceased to exist. He returned to his home with his father, and when I saw him, twenty-three days after the injury, there was still some swelling of the upper lid. There was no pus present, he was able to outline large objects with that eye, such as the hand, but the eye was permanently injured to such a degree that he will never be able to read ordinary print.

CASE II.—Philip W., aged twenty-two, carpenter by trade, on the fifth of April, while shingling a house, was struck in the left eye with the head of a nail. He realized that he had received a serious injury, and immediately closed the eye and descended from the top of the house as quickly as possible for fear that he would faint. He had been reading about "first aid in injury," and was careful to keep the eye closed so as to prevent any further damage or to prevent infection. I found the cornea had a crescentic cut with the upper end of the cut in upper and outer quadrant of the cornea, and the lower end of the wound in the lower and outer quadrant of the cornea. The wound extended entirely through the cornea, and the lower portion of the iris opposite the lower end of the wound was much lacerated. There was no blood in the chambers of the eye; in fact, there was no hemorrhage connected with

the injury. He was suffering great pain, and could distinguish light and see large objects moving in front of his eye. The father was very anxious to know what the outcome would be. I said to him that if the wound was not infected, and did not become so, that there would be an excellent chance to save the eyeball, but as to the amount of vision I could not tell what the result would be, even if the eyeball were saved. At the end of twenty-four hours there was a considerable amount of haziness about the lips of the wound, and the pain still existed which he had from the first. At the end of forty-eight hours the eye was filled with pus, and it was removed at once, as it was very evident that we could not save even the globe. I have reported two cases simply to illustrate the great danger of infection in injuries of the cornea.

In the first case, that of A. R., the foreign body was so small that it was never observed by the doctor who first treated it, and of course when I saw him there was no possibility of seeing anything in the way of a foreign body.

In the second case, that of Philip W., it is to be presumed that the nailhead was as clean as anything of that kind can be, and in this case nothing but sterile solutions were used from the first, and yet the eye was lost through infection. The infectious germ was either on the nailhead which produced the injury, or the conjunctival sac must have contained the germ which developed the suppuration. In the case of Albert R. there could be no doubt but that the infection occurred either through the solutions which were applied, or that his eye contained the infectious germ which entered the corneal wound and developed the process which occurred there. The general surgeon, as well as the oculist, should always bear in mind the fact that it is possible to infect the cornea in using unclean instruments for the purpose of removing bodies, whether they be the instruments made especially for that purpose, or whether it be a "toothpick" or some other contrivance used for removing the body. Further, he should always see that all solutions are sterile which are used in an injured eye, it matters not how trivial the injury may be, as this will relieve him from all responsibility and place it where it properly belongs. If either of these young men had been in the employ of the Southern Railway, or any other railway for that matter, or corporation, the chances would have been good for a lawsuit.

The following case, which occurred since this report was made, is

here appended to illustrate what peculiar results may follow an injury to the cornea.

Wm. H., aged twenty-seven: On Sunday, May 29th, while witnessing a ball game, a friend playfully threw a "green bone" at him and struck him in the cornea of the left eye about a line from its lower margin, making a clean cut wound, permitting the iris to flow out into it. He sought the advice of a practitioner at once, who used nothing but sterile solutions in the eye, and the atropia solution which was employed to relieve his pain was also sterilized. I saw this man on the first day of June, which was four days after the injury. There was still a large piece of the iris resting within the lips of the wound. I cocaineized the protruding iris, and removed it with a pair of scissors. All of the ordinary precautions were taken to prevent infection and none followed, and the man has made a good recovery, so far as the closure of the wound is concerned. This bone had been thrown on the commons and was fresh, as I mentioned before, that is, it was still soft, not having been exposed long enough to get dry after the meat had been removed from it. One would naturally think that a wound made with such a piece of bone would be dangerous so far as infection is concerned, but in this instance it was not.

FRACTURES AND DISLOCATIONS OF THE FEMUR.*

BY DR. FRANK B. NORTON.

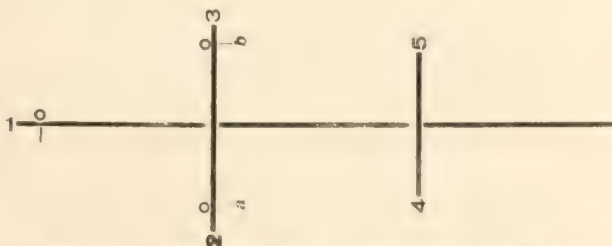
The subject will not pertain to the method of reducing and treatment of such injuries, but to the diagnosis and method of asserting the deformity and shortening caused from injuries to the femur.

I have observed that the difficulty to be overcome results from our inability to secure a proper position for the patient. We have endeavored to overcome this difficulty by a method which I will explain. The patient is placed on a flat surface on his back, with the body perfectly straight. We can then determine the exact conditions.

I use five points on the body to accomplish this, which are as follows: The pre-sternal notch of the manubrium, the anterior superior spinous process of the ileum and the superior borders of the patella. The patient should be instructed to relax his muscles, and with the muscles relaxed find and mark the above named points.

* Read before Louisville Society of Physicians and Surgeons, August 25, 1904.

You can readily understand with the point over the sternum being in a straight line with the umbilicus, and the line between the points over the pelvis being at right angles with this line, the trunk of the individual is necessarily straight; now by extending the line which begins at the point over the sternum to the points at the patella, and placing the legs at an equal distance from this line any deformity or shortening can be seen between the points at the patella and the pelvis. We can accomplish this by a simple arrangement. I have here an instrument designed to represent the lines and points indicated:



Points 1, 4 and 5 adjustable; lines 2 — 3 fixed; points 3 and 4 adjustable.

The part representing the line over the pelvis is fixed at right angles to the part representing the median line, while the part representing the points over the sternum and patella are adjustable.

I begin by placing the pelvis arm in position, then bring the body in line by adjusting the point over the sternum to correspond to the point at the pre-sternal notch; the legs are now brought in line by placing them at an equal distance from the median line, which is indicated by the adjustable arms at the knees.

The patient relaxed from a general anesthetic; a fracture of the hip (unless it is an impacted fracture) can be differentiated from a dislocation by the fact that in fracture the leg and foot can be held by simple extension and counterextension to correspond to the sound leg, while in a case of dislocation it requires the usual manipulations to bring about such results.

It needs but a moment with this method to satisfy ourselves that the fracture or dislocation has been reduced. The greatest advantage for this method is in enabling us to determine accurately the amount of shortening after the patient has recovered. The majority of patients, when about to be dismissed, wish to know how much the injury has shortened the leg, and what is the most important we are often required to state before courts the exact amount of the shortening.

The shortening shows at the patella by adjusting the arm at the knee to correspond with the superior border of the patella of the sound leg. The shortening is shown by marking over the patella of the injured leg at the point the arm touches.

The amount of shortening caused from injury to the femur is the distance from the point so found and the superior border of the patella of that leg.

I know the dimensions of the instrument makes it inconvenient to carry with us; it is nevertheless practical because of the large per cent. of patients injured in this manner taken to hospitals, and with little expense hospitals could be equipped with one.

ACUTE INFLAMMATION.*

BY WILL SALIN, M.D.

It would be impossible to give any clear, simple definition which would embrace all the pathological processes that are grouped under the head of inflammation, but when a visible part is inflamed, its recognized symptoms or signs are change in color or redness, change in sensibility or pain, change in form or swelling, and change in temperature or heat, and we may likewise add change in the function of the part.

1. Change in color, due to over supply of blood, and it is influenced by a number of vessels in the part inflamed. In those tissues where the vessels are scarce the redness is scarcely seen. On the skin and mucous membrane the color is deep scarlet; on some portions of the body, as carbuncles in the back, the discoloration is bluish purple. It also varies as to the disease, as it is copper colored in syphilis, due to increased amount of blood in the part, caused by dilation of vessels in the part. Vessels are sometimes ruptured, and extravasation takes place.

2. Swelling due to several causes, increased blood supply, exudation of serum into surrounding parts, and increased supply of cells. This swelling varies in character and degree. In the hands, feet, prepuce, etc., the swelling is sometimes great, and comes on suddenly. The character of the swelling varies considerably. If you can pit it with the fingers you know that the inflammation is due to extravasation

* Read before the Owen Co., Medical Society.

of lymph (edematous). You can have a hard or indurated inflammation.

3. Pain, increased sensibility. This is constant, but may remit ; comes on with the inflammation and generally goes off with it, aggravated by motion and pressure ; due (1) to pressure on nerves ; (2) inflammation of nerve ; (3) stretching of the nerves ; (4) laceration of nerve. This may be lancinating, dull, throbbing, etc. This pain is not always referred to the part inflamed.

In inflammation of the hip joint it is referred to the knee ; in inflammation of the liver it is referred to the scapula ; in inflammation of the kidney it is referred to the penis ; in inflammation of the bladder it is referred to the glans penis ; in inflammation of the uterus it is referred to the top of the head.

The pain may suddenly cease without the cessation of the inflammation. This is always a sign of mortification having set in. Hiccough, clammy perspiration and debility are also symptoms of mortification. We have various kinds of pains, shooting and darting, as in neuralgia, which is in intensity out of proportion to the amount of damage done. We have also the spasmodic pain, which is intermittent and relieved by pressure, as bellyache. This is a sign, usually, of the absence of inflammation.

Pain is a benefit, as it acts as a signal of danger, and causes the person to apply to a physician. Women bear pain better than men.

4. Heat, due partly to increased amount of arterial blood sent to the part, and also that heat is generated in the part, and shows tissue destruction or change.

5. Alteration in function, as in some of the special senses, as an intolerance of light or sound, increased sensibility or suspension of sense entirely.

In glandular organs we have increased or diminished secretions, as inflammation of the kidney or liver ; the secretion may sometimes be almost stopped.

When we have an inflammation of the mucous membrane we have a flow of a watery kind, and sometimes it contains pus cells, sometimes we have only fibrin, as in diphtheria, when a person is broken down in health or debilitated when inflammation took place, as in scrofulous diathesis, the blood is unhealthy and chronic inflammation is set up and destruction of the parts affected.

The products of inflammation (by exudation) are serum, blood,

mucus and lymph. Inflammation terminates in one of two ways, resolution or death, and whether immediate absorption or suppurative or granular degeneration shall occur in any particular case of inflammation will depend (1) on the state of the blood; (2) on the seat of the inflammation; (3) on the degree of inflammation. Suppuration is either circumscribed (as in abscess), diffusive (in erysipelas), or superficial (in leucorrhea).

The first indication in the treatment is to remove the cause of the inflammation, which very often is in the power of the surgeon to remove at once, as a bean or button in the nose or ear. Treatment is both local and constitutional.

1. Indication is rest. Place patient in a quiet state, resting the part affected. Sometimes local rest is all that is required, but the necessity of rest during active inflammation of any organ is a rule without exception.

2. Position—A choice of position is often dictated by the sensation of the patient, as in the case of a bone felon. An elevated part is better than a dependent one; it prevents arterial flow and accelerates venous flow, thus relieving the overloaded vessels.

3. Application of cold, a painful remedy, is often indicated. Cold lessens sensibility, contracts vessels and destroys cell action, stopping the heat. It is one of the best remedies we have for controlling the inflammatory process. You use cold in various temperatures, from 50°F to 0°F, according to the case under treatment. One of the methods of application is a wet cloth on the part, and another is by irrigation, allowing water to drip from a vessel. The water may be indicated, or you may apply dry cold, as a rubber bag filled with ice or water. This will do where the skin is not lacerated. If lacerated, irrigation is the best method. When cold is not applicable we can use heat, dry or moist, a hot bran or salt bag, or hot water bag. The hot water may also be applied by irrigation. Sometimes the heat is best applied by means of steam, especially in ear and throat diseases. When you want to hasten suppuration you use poultices—flaxseed, slippery elm. Do not allow your poultices to remain on the part longer than four hours. These poultices may also be medicated.

4. Diet—I believe the principal requisites of diet in illness to be liquidity and facility of digestion and assimilation. In an irritable febrile state of the system, the presence of a solid body, as meat or bread in the stomach, when no digestive fluid is secreted to act upon it, has the

effect of a foreign substance, which will disturb or increase existing disturbances.

5. Constitutional—The hydragogue cathartics are sometimes indicated. Of course, if the inflammation is within the abdominal walls, you should not use the cathartics. Mercurials are adapted to every stage of the inflammatory process. Calomel not only acts as a cathartic, but also increases glandular action. Calomel, in one-half grain doses, combined with opium, is recommended to promote absorption, especially in syphilitic inflammation, to absorb the deposit of lymph. Anodynes to allay the pain, unless the patient is also suffering with constipation. Tonics, iron and the bitter tonics are indicated.

EP. KY., P. O. OWENTON, R. F. D., No. 3.

Selections.

A CASE ILLUSTRATING SOME POINTS IN THE TREATMENT OF MOVABLE KIDNEY.

BY H. M. W. GRAY, F.R.C.S.Ed.

Surgeon Aberdeen Royal Infirmary.

CASE.—A female patient, about four years before she came under my charge, was operated on for movable kidney. She was much relieved for two years, but after this time there was a gradual return of symptoms similar to those from which she had previously suffered. Four weeks before I saw her she had a fall, after which the symptoms became much exaggerated. She complained of great pain in the right side, especially on exertion. It became much aggravated if she remained long in an erect posture. It was relieved after lying down for a time. She had attacks of severe retching, and had fainted on several occasions. She had frequency of micturition during the attacks, and stated also that at times she was suddenly compelled to pass a large quantity of urine, after which the pain would sometimes be relieved a little. In very severe attacks there was occasionally a little blood noticed in the urine. Her life was made miserable by her condition, and, in addition, she suffered much from sleeplessness.

She was rather corpulent, which condition hindered accurate palpation. She complained of great tenderness over the right side of the front of the abdomen external to the outer border of the rectus abdominis. Tenderness was also present, to a less extent, in the loin posteriorly, below the scar of the first incision, which had evidently been the usual oblique one parallel to the twelfth rib. It had retracted upwards till it was now over the eleventh rib. Tenderness was most marked over an oval area, two by three inches, just above the level of the umbilicus and close to the outer border of the right rectus muscle.

Examination was unsatisfactory. Only very occasionally, when the patient was persuaded to take a deep breath, was there any suspicion of mobile kidney, and that rested chiefly on the increase of tenderness during inspiration while the hand was pressed back into the region of the kidney. (Murphy's test for cholecystitis positive?) The discomfort might have arisen from an inflamed gall bladder.

Examination under chloroform gave no more help. Nothing abnormal was felt in the pelvis on vaginal examination, except slight fissuring of the cervix uteri and a relaxed perineum.

There was no blood, pus, or other abnormality in the urine.

I operated on December 4, 1903. The usual incision for exploring the kidney was made, and I found the deep scar of the first operation in the muscles under my skin incision. The right kidney was found to be apparently firmly fixed to the abdominal parietes by very strong fibrous adhesions. There were also two dense fibrous bands stretching across the front of the ureter about one inch below the kidney. Only the lower part of the kidney was at first palpable. On further examination, I found that the upper three-fourths were quite free from adhesions and were covered by perinephric fat. While I was palpating this part, the kidney swung suddenly downwards and forwards until its upper pole was pointing to the opposite iliac region. The case was now clear. It was quite conceivable that, in the erect posture, especially on exertion, when the diaphragm would be forcibly contracted, the kidney would assume the position I have described. The dense band of adhesions was fixed, at its inner end, to the lower pole and adjacent outer margin of the kidney, while the outer end was fixed to the abdominal wall opposite to the twelfth rib. Round this fixed point the kidney rotated. This position caused kinking of the ureter at probably two points.

The peritoneum was opened externally to the ascending colon, in order to examine the gall bladder and appendix. Both were normal. The liver was not enlarged, but its under surface was studded with hard nodules, the size of a split pea and greyish in color. The peritoneum elsewhere was normal. The nodules did not strike one as being either tuberculous or malignant. The peritoneum was sutured with catgut. The kidney was freed from adhesions. The capsule had to be incised at the lower part, and shelled off where the very dense fibrous band was attached. There was only slight bleeding from the exposed cortex, which soon stopped spontaneously.

The fibrous bands over the ureter were divided. The perinephric fat between the posterior surface of the kidney and the abdominal wall was removed, and strips of gauze were packed round the kidney, leaving the pelvis of the kidney quite free. The ends of the gauze strips were brought out of the posterior part of the wound, the rest of which was sutured. These gauze strips were kept in position for seven days. They were then removed under gas anesthesia, and a thick drainage

tube inserted down to the kidney. This was removed a week later.

The patient lay on her back for a month. She was quite relieved of her symptoms except the sleeplessness, and had been able to return to her ordinary duties, for which she was previously incapacitated.

I consider this an interesting and instructive case. By many the operation of nephropexy is regarded as rather futile. Perhaps this is not entirely without justification, as the operation is followed, in my opinion, by an unnecessarily large number of failures. One finds in these either that the kidney has become as movable as before the operation, or that while the kidney remains apparently fixed the symptoms become as bad or even worse than before. The latter was the case in my patient.

Failure to fix the kidney is due chiefly, I think, to neglect of a very simple, but very important point during the operation. I have hunted English text books in vain for any weight being put on the necessity for removing the layer of perineal fat which exists between the kidney and the abdominal parietes. American surgeons have recently laid much stress on this point. If a pad of fatty tissue be left between the kidney and the comparatively fixed abdominal wall, I do not see how success can be expected, however cleverly sutures be inserted to hold the kidney. To ensure success the posterior perineal fat must be cut or torn away. In spite of the methods suggested recently for inserting sutures to fix the kidney, I see no reason to alter the method I have invariably used. It is simpler and easier of performance than any other that I know. It is akin to Senn's method, and was suggested to me on reading of it. He advocated gauze slings around each pole. Owing to the prolonged presence of the gauze strips around the kidney, granulation tissue is formed to a considerable amount, and the transformation of this into fibrous tissue ensures firm adhesion of the whole of the convexity of the kidney to the surrounding parts, most important, of course, being the adhesions to the abdominal wall. Where decortication is practiced extensively enough, a similar result is obtained, but here again only if the perirenal fat is removed.

The second principle indicated by the case is the avoidance of the use of slings or special supports to the lower part of the kidney. These produce, no doubt, very strong fixation of the lower part, but unless similar fixation of the upper part is secured, we see what can happen and what severe symptoms may result.

During the past three or four years I have made a constant practice in such cases where any doubt of the diagnosis exists, of opening the peritoneal cavity along the outer side of the ascending colon, and palpating the gall bladder, bile ducts, pylorus, appendix and broad ligament. There is often difficulty in coming to a decision as to whether the symptoms are due entirely to the presence of an abnormally movable kidney, or whether the case is complicated by the presence of biliary trouble, pyloric adhesions, appendicitis or ovarian disease. Palpation of these parts, easily carried out from the wound in the loin, will settle the matter.—*The Edinburgh Medical Journal.*

Progress of Medical and Surgical Science.

Death in Battle During the Last Century.—*Journal of the Association of Military Surgeons*, October 1904. Professor Pichet, of Paris, has been looking back over the past century, and reckoned the death toll due to wars during the enlightened nineteenth century. He estimates the grand total to be about 14,000,000, made up as follows: Napoleonic Wars, 8,000,000; Crimean Wars, 300,000; Italian War, 300,000; American Civil War, 400,000; Franco-German war, 800,000; Russo-Turkish War, 400,000; Civil Wars in South America, 500,000; various colonial expeditions in India, Mexico, Tonquin, South Africa, etc., 3,000,000. If to those who died on the stricken field we add the number of "broken," disabled soldiers, the widows and children who suffered, we have indeed a huge budget of slaughter, a record of Christian activity that almost makes one despair.

The new century seems to have started as if it intended to maintain the record.

Operative Treatment in Typhoid Perforation.—Operative treatment is indicated in every case of perforation of intestines during course of typhoid fever as soon as diagnosis is made. The main questions which confront the physician are: (1) On what can we base diagnosis of perforation and indication for operation? and (2) in what cases are we justified in recommending surgical interference when diagnosis is still in doubt?

To obtain a satisfactory answer to the first question, it is first necessary to have a history of previous abdominal condition, particularly with regard to pain, tenderness and tympanites. There are only two symptoms of perforation *per se*: sudden pain and gas in peritoneal cavity; the other symptoms are those of accompanying peritonitis. Collapse is not so common. Pain and tenderness are more marked in right side. Nothing characteristic in temperature changes. Leukocytosis is of slight diagnostic value.

With regard to the second question, nothing short of a moribund condition is a contraindication to operation when the diagnosis is once made.

In cases in which the diagnosis is probable, especially if the general condition is becoming generally worse, explore. If symptoms are suspicious, but not clear, it is best to wait. If the symptoms are of twelve hours duration, and point more to perforation than anything else, especially if the condition is growing steadily worse, operate. If symptoms have existed for twenty-four hours, condition of the patient is good, and the diagnosis still in doubt, wait a few hours, but watch closely, as it may be perforation protected by adhesions. If the diagnosis is fairly sure, it would be just as wrong to wait for adhesions, as in case of acute appendicitis. Better to operate and find nothing than to delay too long.—*Medical Record*.

Mortality and Management of Pneumonia.—By Edward F. Wells, M.D., Chicago, Ill.—In a most able paper, read before the last meeting of the American Medical Association, Dr. Wells spoke of the increasing prevalence and also the increasing mortality of pneumonia, and that was taking place at a time when there was a growing, if not a distinctly expressed opinion within and without the profession, that such should not exist.

He states that pneumonia in the temperate regions is the severest and most deadly of the commoner diseases; that it is responsible for a morbidity annually of about 0.7 per cent., a mortality rate of 0.13, and it causes about 8.1 per cent. of all deaths. That it is steadily on the increase is proven by the returns of the New York and Philadelphia Health Boards. Some of the chief reasons for this prevalence can be found in the facts that the pneumococcus varies in virulence in different strains, and that any strain may be made more or less virulent by cultivation and that the increased prevalence and heightened death rate may be due to the propagation, survival and dissemination of the most virulent varieties is a fair inference. He found what he believes to be, and no doubt is, a most important observation, that in a hundred and thirty-five which he examined that the pneumococcus was absent in some families in every member, while in other families it would be present in nearly every member of the family; it was also observed that in those families where the germs were found so freely distributed that one or more cases of pneumonia had recently occurred, while in those free of germs that no cases had occurred in. This makes it easy to account for the house epidemics that all have seen more or less of, and, most important of all, point the way toward a reasonable and practicable system of prophylaxis.

He regrets very much that he is not able to explain how the disease is disseminated, and why it is so prevalent in some families, and how the germ produces pneumonia, etc., but says while these things can not be explained satisfactorily at the present time, that certain assumptions may be made that do not lie far from the line of truth that offers plausible explanations for many known facts, and can be employed by the profession for a basis for working out a prophylaxis.

The disease may be disseminated by the patient sneezing, coughing and expectorating, and in this way cause unaffected members to become infected by living in close contact with those who have the disease.

Pneumonia is caused by the germ gaining access to and developing in the alveoli of the lungs. The access thereto may be obtained by the germs being drawn down into the lungs from the upper air tract while the patient is making efforts at coughing, etc, or may be carried there by the blood stream, and while in the blood stream come in contact with an exceptionally good culture media, and germs that had not been virulent becoming rapidly so before reaching the lung.

The mortality of pneumonia is very great, the per cent. being slightly in excess of 20 per cent. Certain conditions, of course, modify the death rate, as in all diseases, the rate being higher in public hospitals than in private practice, owing to the class of patients coming there for treatment; higher in armies in time of war than in time of peace; higher in some countries than in others, and finally, in some instances, those reporting certain favorite lines of treatment, may, through prejudice, omit certain fatal cases in order to make the death rate lower, but with all this taken into consideration the mortality of pneumonia is not only appalling, but on the increase. He says that the fatal results are caused by the direct effects of the pneumococcus infection, producing a toxemia that destroys life, and that this may be the case in those who suffer from a large area involved by the germs, or may take place in those who have only a small area involved.

He calls attention to the fact that after the introduction of the pneumotoxin into the system that certain symptoms always follow, such as chills, raging fever, lowered arterial tension, etc., and that this takes place, even though the amount has been infinitesimal and diluted beyond computation. Other pathological changes that take place may be due to the effects of the pneumotoxin plus the combined toxic leucomaines of tissue waste, etc. The measure of these, especially of the first class, will depend on the virulency and special characteristics of the infecting germ, and the intangible and immeasurable general

and special resistance offered by the patient. This will vary in different persons, and in the same person at different times.

In speaking of the treatment and prophylaxis, he believes that the time is at hand when the profession should try to lower the number of cases, and to do this advises the following rules, which we give in full :

1. Pneumonia sputa should be destroyed before it becomes dry. The sputa which clings to the lips and teeth, and that which may adhere to the fingers and bedding, should be wiped up with moist cotton, gauze or other cloth and these burned. All sputa, although not pneumonic, might as well be burned. The healthy as well as the pneumonic should be taught to hold a moist or at least a dry cloth over the nose and mouth when they are in the act of coughing, sneezing, etc., and by so doing prevent the spray of germs that would otherwise take place from the mouth.

The nostrils, mouth and throat should be kept as clean as possible. Cleansing sprays and washes for the nostrils; washes for the mouth and brushing the teeth; gargles and drinks for the throat. Permanent occlusion of the nostrils should be cared for by the use of proper means for that purpose; transient ones removed by adrenalin. Honeycombed tonsils and adenoid growths should be removed. Taking water after meals should be a habit, and every means used to prevent sleeping with the mouth open.

Those not forced to should not remain long in a room where a pneumonic patient is, and after the case is over the room should be disinfected, as is done after diphtheria and other infectious diseases.

Respiratory catarrhs, from whatever source, should be relieved as early as possible, and all physical and mental exhaustion, privation, undue exposure to cold, etc., should be avoided.

In the treatment he advises the following measures: At the beginning, morphine, $\frac{1}{16}$ to $\frac{1}{8}$ grain; patient kept absolutely quiet until chill passes off, then open bowels with enema of epsom salts, 2 ounces; glycerine, 2 ounces, and water, 12 ounces; later and efficient cathartic should be used.

Supplement the efforts of nature in lowering the arterial tension by using veratrium viride, 3 to 5 drops every two or three hours until nausea is produced. Later digitalis, 10 to 20 drops, every three to six hours.

For the relief of high temperature, ice caps and coils, with 15 to 25 drops of guaiacol. If the ordinary leukocytosis does not appear the use of nucleinic acid and salicylate of soda are to be made, and if

needed the use of venesection to the extent of drawing off eight to twenty-four ounces of blood, and follow with the same amount of water in order to dilute those toxins that are left. Patients should have large amounts of fluids during the attack, so as to wash the blood and to rid the system of as much toxins as possible.

Foods given should be well salted so as to supply the necessary chlorides to the system that are so important.

Serums are not to be relied on at the present time.

Pulmonary edema should be met by the use of strychnine, adrenaline and morphine, combined with the use of oxygen early, and to be used freely.—[Abstract from the September 24th issue of *Journal of American Medical Association*.

Suggestions for the Prevention of Puerperal Infection in Private Practice.—By John W. Byers, M.A., M.D. (*Lancet*, August 13, 1904.) Dr. Byers gives the statistics of the different maternity hospitals of Ireland, Scotland, England and Wales, showing that the mortality from puerperal sepsis in these lying-in hospitals is less than 1 per cent. This low mortality percentage is due to non-interference on the part of the surgeon in a process that in 75 per cent. of cases is physiological, and when a pathological condition presents itself the use of aseptic and antiseptic measures prevents infection.

Before the use of antiseptics and when midwifery was reigning in all her destructive glory, maternity hospitals were regarded by the public with suspicion, puerperal fever was constantly breaking out in them, and owing to this fact their wards had frequently to be closed, and many members of the profession were in favor of abolishing altogether such institutions, while now all this is changed, and there is no place in which a woman can be more safely located for her confinement than in a properly conducted maternity hospital.

Dr. Byers says, before making any practical suggestions for bringing the results for private midwifery practice more into line with what is now the rule in maternity hospitals, that it will be necessary to consider certain facts which throw light upon the nature of puerperal infection:

1. In at least 75 per cent. of midwifery cases labor is a natural physiological process occurring in such a manner that nothing more than a certain amount of care and expectant watchfulness is required and no interference is needed.

2. A woman who delivers herself spontaneously, and who has never been examined internally, rarely has any signs of puerperal infection. Leopold was the first to show this when he pointed out that at the Dresden Lying-in Hospital of a series of 248 cases who were delivered without medical aid, who were neither examined, touched nor syringed, 98 per cent. had no fever during the puerperium, five only had febrile symptoms, and they were slight.

3. Women who enter a lying-in hospital after delivery, that is, those confined on the way to the hospital, rarely suffer from puerperal infection, because, through not having been examined internally, they have avoided the risk of having the germs which causes the disease conveyed to them.

4. The uterus and vagina in a pregnant woman who has not been examined internally contain no pathogenic organism, but upon the inner surface of the labia and the margin of the hymen in 60 per cent. of cases are to be found pathogenic germs, and the mere introduction of the fingers or a speculum carries the germs in a great majority of cases.

5. The results of midwifery practice becomes better the less vaginal examination and the more abdominal examination is used.

6. Vaginal examinations during labor are always attended with risk, and should never be employed unless to attain information for the welfare of the patient which can not be otherwise obtained by abdominal palpation. It must never be forgotten that a patient in labor who has not been examined internally is almost absolutely safe from the risks of puerperal infection.

7. That puerperal infection is due to the introduction of micro-organisms which may be found on the patient's vulva, clothes, bedding, or on the nurse or attending physician. Care must be taken that the hands are not again contaminated after once being sterilized; the vulva should be cleansed with soap and water, and upon making an examination the vagina should be held open with the forefinger and thumb of the left hand, while the examination is made with the right hand.

8. Nurses and students should be taught clearly the risks of vaginal examination, and the great value and absolute safety of replacing this by the abdominal method. If in a normal case an internal examination is made, the best time is just after the waters have been ruptured. Modern hospitals show that the vaginal examination is the main source of puerperal infection.

2. Nurses and students should be taught more and more clearly the cause of puerperal infection, viz., that it is introduced from without, and also the importance of keeping themselves and the patient aseptic and how extremely easy it is for the disease to be introduced.

3. It should be clearly recognized that in 75 per cent. of cases labor is a natural process not to be interfered with, and as has been stated by Edgar, a conservative one, the tendency of which is to prevent sepsis, and it should be our aim not to thwart this process or supplant it by methods of art, but to follow and aid it, interfering only when, for one reason or another, the resources of nature prove inefficient.

The careful examination of the pregnant is important, so that at an early date we may detect any flaw in any of the organs (heart, lungs, kidney, etc.) the knowledge of which may lead to a judicious prophylactic treatment, and so maintain the patient's strength and health and resisting power.

A few weeks before the expected time of confinement a careful abdominal examination should be made, especially in primipara, and in order to ascertain the position of the fetus and whether or not there is any abdominal complication.

The immediate repair of any laceration of the pelvic floor following delivery is a most important point in the prevention of puerperal infection.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ"

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Editorial.

The thirty-fifth annual session of the Medical Society of Virginia will be held at Richmond, Va., October 18-21, 1904. The meeting will be called to order by the President, Dr. Joseph A. Gale, of Roanoke, Va., at 8 p. m., Tuesday, October 18, 1904. An interesting feature will be a symposium on serum therapy, while about thirty-five excellent papers will be presented. The Corresponding Secretary is Dr. John F. Winn, Richmond, Va.

The Mississippi Valley Medical Association will hold its thirtieth annual meeting at the Grand Hotel, Cincinnati, Ohio, October 11, 12, 13, 1904. The following are the officers:

President—Hugh T. Patrick, M.D., Chicago, Ill.

First Vice President—Bransford Lewis, M.D., St. Louis, Mo.

Second Vice President—George W. Gale, Jr., M.D., Springfield, Mo.

Secretary—Henry Enos Tuley, M.D., Louisville, Ky.

Assistant Secretary—S. C. Stanton, M.D., Chicago, Ill.

Treasurer—Thomas Hunt Stucky, M.D., Louisville, Ky.

Chairman Committee of Arrangements—B. Merrill Ricketts, M.D., Cincinnati, Ohio.

The annual meeting will be called at 9 o'clock A. M., Tuesday, October 11th, continuing Wednesday and Thursday, October 12th and 13th. The general sessions and meetings of the Medical and Surgical Sections will be held at the Grand Hotel, Cincinnati, Ohio, where the medical and surgical exhibits will also be located.

It is urged that those who will attend will write for accommodations direct to the hotel, or to Dr. B. M. Ricketts, Chairman of the Committee on Arrangements.

The Wise County (Virginia) Medical Society met at Wise, Va., September 28, 1904, at 1:30 P. M., Drs. T. M. Cherry and H. M. Miles, Acting Committee on Arrangements. The following programme was presented:

Secret Nostrums—Discussion opened by Dr. T. M. Cherry, of Glamorgan.

The Relation of the Dentist to the Physician—Paper by J. M. Hill, D.D.S., Wise, Va.

Life Insurance Examinations—Discussion opened by Dr. H. M. Miles, of Wise, Va.

Dr. M. L. Stallard is President and Dr. T. M. Cherry is the Secretary.

We take great pleasure in publishing the requirements of the State Board of Health of Kentucky for medical colleges and students. These requirements are as follows:

On and after July 1, 1905, every medical college shall comply with the following requirements as a condition of being recognized as reputable by the State Board of Health of Kentucky:

1. It shall uniformly exact the requirements for matriculation set forth in "Requirements for Admission to Medical Colleges," adopted by this Board on this date.

2. It shall literally observe its own published requirements for

admission, tuition, time of attendance at the annual sessions and graduation, which must be definitely expressed.

3. It shall have adequate equipment and an active and competent faculty for teaching the science and art of medicine, embracing the following departments, viz.: Anatomy, Physiology, Chemistry, Pathology, Histology, Bacteriology, Surgery, Obstetrics, Gynecology, Ophthalmology, Otology, Hygiene and State Medicine, Medical Jurisprudence, Physical Diagnosis and Therapeutics and Practice, in accordance with the system to which the college belongs.

4. It shall have clinical and hospital facilities based upon a minimum municipal population at its place of location of not less than fifty thousand; provided that this requirement shall not apply to institutions under State control, which by virtue of such control receive patients gratuitously from all parts of such State.

5. It shall require actual attendance upon 80 per cent. of each of four courses of instruction of not less than thirty continuous weeks, excluding holidays, in four separate years, and shall not hold more than one graduating course in any one year.*

6. It shall not accept notes in payment of fees, or offer or accept scholarships, or any reduction in fees, or any form of rebates, except as provided for or required under State laws or under the laws of endowed universities, and no student shall be given credit for attendance, or advanced, or graduated, until all fees have been paid.

7. Colleges may honor official credentials issued by medical colleges of equal requirements, as to students who have complied with the "Requirements for Admission to Medical Colleges," except in the branches of study embraced in the last year of their own curriculum.

REQUIREMENTS FOR ADMISSION TO MEDICAL COLLEGES.

All colleges shall require every medical student applying for matriculation on and after July 1, 1904, to present to it "A Medical Student's Certificate," issued to him by a Certified Examiner of the State Board of Health or State Board of Medical Examiners of the State in which such college is located, approved by such board, and a certificate of good moral character.

The examiner shall require as a basis for his certificate:

(a) A degree of A.B., B.S., or equivalent, from an approved

* It should be noted that the provision is made for giving credit for A.B. or B.S. degrees.

university, college or academy of arts, science or philosophy.

(b) A diploma or certificate of graduation from an approved high school or normal school.

(c) A State teacher's permanent or life certificate.

(d) A medical student's certificate from any State Board of Health or Examiners demanding equal requirements.

Or, an examination in writing in the following branches :

(a) English, submitting a composition in his handwriting on some subject of general interest embracing not less than two hundred words, which shall be considered with reference to penmanship, spelling, pronunciation, thought and construction.

(b) United States History.

(c) Arithmetic, vulgar and decimal fractions, percentage and compound numbers.

(d) Algebra, through equations.

(e) Latin, through first year of ordinary course.

(f) Physics, the elements of mechanics, hydrostatics, hydraulics, heat, optics and acoustics.

GRANTING OF CONDITIONS.

Applicants failing to obtain a general average of 75 per cent. in the entrance examination and falling below 55 per cent. in but two branches may be conditioned by the Official Examiner upon a different form of certificate. The Examiner shall make a separate list of such conditioned applicants in duplicate, one copy of which shall be sent to the State Board of Health or Examiners, and the other retained in his office.

REMOVAL OF CONDITIONS.

Such conditions must be removed by the presentation of a certificate from the Examiner that such applicant has passed a satisfactory examination in the branches in which he was formerly found deficient before he can receive credit for the first or be permitted to enter upon his second year of study, and the Examiner shall furnish a list of such applicants to the State Board of the jurisdiction.

FEE.

Two dollars is hereby fixed as the fee to be collected by the Examiner for each certificate in Kentucky. Those examined in special subjects to remove conditions will not be required to pay again, but those failing and taking a second examination will pay another fee.

By order of the Board.

J. M. MATTHEWS, M.D., *President.*

I. N. McCORMACK, M.D., *Secretary.*

Book Reviews.

Strabismus or Squint, by Francis Valk, M.D., Professor of Diseases of the Eye, New York Post Graduate School and Hospital; Consulting Ophthalmologist Thrall Hospital, and formerly Assistant Surgeon Manhattan Eye and Ear Hospital; Visiting Ophthalmologist Randall's Island Hospital and Ophthalmologist to the New York Dispensary; Fellow of the New York Academy of Medicine and of the State and County Medical Society; Member of the Greater New York Medical Society and the Society of medical Jurisprudence, etc. New York: G. P. Putnam's Sons, 1904.

In this excellent work of 163 pages the author reviews the results of his experience with cases of muscular imbalance. In his classification of squint he adopts the nomenclature introduced by Stephens of esophoria, exophoria, etc., to denote a tendency of the visual line to deviate from the normal (*lateral squint*) and esotropia, exotropia, etc., to denote a constant deviation or fixed squint. Valk discards the old idea that the refractive error is the determining cause of squint. He looks upon the fusion power or the ability to bring about single vision as the chief cause of squint. He also attaches importance to the power of the recti muscles to move the eyeball in the field of vision as a determining factor.

In deciding upon the treatment of squint he lays stress upon determining whether the imbalance is due to weakness (insufficiency), or to increased power of one of the recti muscles. Although the author does not consider errors of refraction the cause of heterophoria, he advises the use of lenses to increase the fusion power. In esophoria, after failure of glasses to improve the condition, he advises shortening of the external rectus with catgut sutures. In exophoria correcting lenses, prismatic exercises, and, if the condition continues unimproved, shortening of one or both interni is considered by him the safest method of treatment. In fixed or apparent squint two conditions are met with; either there is a congenital amblyopia of one of the eyes or vision is good in both, and there is considerable error of refraction. If the first condition be present the indication is to equalize muscular balance for cosmetic purposes, which can only be done by operation. In the second condition full correction of the errors of refraction determined under the effect of a mydriatic will often straighten the eye. Failing to do so, operation will have to be resorted to.

The author includes in his work quite a number of interesting cases

illustrating the method of examination, indications for operation, and the final results. He also describes in detail the operations ordinarily employed in squint, and devotes some space to the after treatment.

The work as a whole is one of considerable merit, and should be in the library of every one interested in the treatment of errors of the muscular apparatus of the eyes. The work contains a few cuts illustrating the steps in the operations and demonstrating apparatus employed in the examination of muscular troubles.

Infection and Immunity, with Special Reference to the Prevention of Infectious Diseases, by Geo. M. Sternberg, M.D., LL.D., Surgeon-General U. S. Army (Retired).

The urgent need for enlightenment upon these subjects is well put by the author when he says: "The general statement may be made that all infectious diseases are preventible diseases, and that they continue to prevail and claim hundreds of thousands of victims annually is largely due to the fact that the public generally has not yet been educated upon these subjects." The present volume is a popular resume of the present state of knowledge upon this subject. It is intended for the non-medical reader, and is shorn of technical terms as far as possible, and when necessary to use such suitable explanation is given. In Part I. are considered infection, disinfection and immunity, while Part II. is devoted to the infectious diseases and means of prevention. It is a capable work, and should be in every house.

BOOKS RECEIVED.

The Suppression of Tuberculosis, by Professor E. von Behring, University of Marburg. Authorized Translation by Chas. Boldnan, M.D. Cloth, \$1.00. New York: John Wiley & Sons, 1904.

The Physiological Feeding of Infants, by Eric Pritchard, M.A., M.D. (Oxon.) M.R.C.P. (Lond.). Second Edition. Cloth, \$1.50 net. Enlarged and Rewritten. Chicago: W. T. Keene & Co., 1904.

Kirke's Handbook of Physiology. Revised by Frederick C. Busch, B.S., M.D., Professor of Physiology Medical Department University of Buffalo. Fifth American Revision, with 535 illustrations, including many in colors. New York: Wm. Wood & Co., 1904.

Simon's Physiological Chemistry. A Text Book of Physiological Chemistry. For Students and Practitioners of Medicine. By Charles E. Simon, M.D., late Resident Physician, Johns-Hopkins Hospital; author of Simon's Clinical Diagnosis, etc. New (2d) edition. Revised and enlarged. Octavo. 500 pages. Cloth, \$3.25 net. Philadelphia and New York: Lea Brothers & Co., Publishers.

Lea's Series of Medical Epitomes. Nagel's Epitome of Nervous and Mental Diseases. A Manual for Students and Physicians. By Joseph Darwin Nagel, M.D., Consulting Physician to the French Hospital, New York. In one 12mo. volume of 276 pages, with 46 illustrations. Cloth, \$1.00 net. Philadelphia and New York: Lea Brothers & Co., Publishers. 1904.

Thirtieth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the Fiscal Year Ending June 30, 1903. Lansing, Mich.; Root-Smith Printing Co., 1903.

The Quarter and Semi-Decade Treatment and Curability of Epilepsia. By C. A. Hughes, M.D. St. Louis: A Reprint, 1904.

A Simple Method for the Reduction of Luxations of the Humerus. By Eleanore Boulton, A.B., M.D. Philadelphia: A Reprint, 1904.

Origin of the Vermiform Appendix. A Preliminary Report. By Alfred Moore, M.D. Memphis, Tenn.: A Reprint, 1904.

Notices.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ending September 7, 1904:

- BROOKS, S. D., Surgeon—Granted leave of absence for thirty days from September 2, 1904, on account of sickness. September 2, 1904.
- HOBBS, W. C., Passed Assistant Surgeon—Granted leave of absence for seven days from August 20, 1904, under the provisions of Paragraph 191 of the regulations.
- KERR, J. W., Passed Assistant Surgeon—Granted leave of absence for four days from September 1, 1904, in accordance with the provisions of Paragraph 191 of the regulations.
- ROBINSON, D. E., Passed Assistant Surgeon—Granted leave of absence for two days from September 6, 1904, under the provisions of Paragraph 191 of the regulations.
- HUNT, REID, Pharmacist—Detailed to represent the Service at the meeting of the American Pharmaceutical Association at Kansas City, Mo., September 5 to September 10, 1904.
- BALLARD, J. C., Acting Assistant Surgeon—Granted leave of absence for seven days from September 5, 1904. September 2, 1904.
- MACKALL, B. MCV., Acting Assistant Surgeon—Granted leave of absence for seven days under the provisions of Paragraph 210 of the regulations.
- ROEHRIG, A. M., Pharmacist—Granted leave of absence for thirty days from September 12, 1904. September 1, 1904.
- STEARNS, W. L., Pharmacist—Granted leave of absence for twenty-nine days from September 6, 1904. September 1, 1904.
- O'GORMAN, T. V., Pharmacist—Department letter of August 10, 1904, granting Pharmacist O'Gorman leave of absence for thirty days from August 18, 1904, amended so that said leave of absence shall be effective from August 24, 1904. September 2, 1904.
- LA GRANGE, J. V., Pharmacist—Granted leave of absence for twenty-three days from September 15, 1904. August 30, 1904.
- HOLSENDORF, B. E., Pharmacist—Department letter of August 6, 1904, granting Pharmacist Holsendorf leave of absence for thirty days from September 1, 1904, amended so that said leave shall be for twenty-four days only. September 2, 1904.

BOARD CONVENED.

Board convened to meet at Washington, D. C., October 3, 1904, for the examination of candidates for appointment as Assistant Surgeons in the Service. Detail for the Board: Surgeon W. P. McIntosh, Chairman; Surgeon G. M. Guiteras, Passed Assistant Surgeon John F. Anderson, Recorder.

PROMOTION.

Assistant Surgeon D. H. Currie commissioned as Passed Assistant Surgeon, to rank as such from July 28, 1904. August 30, 1904.

Assistant Surgeon J. M. Holt commissioned as Passed Assistant Surgeon, to rank as such from July 27, 1904. August 30, 1904.

Assistant Surgeon F. E. Trotter commissioned as Passed Assistant Surgeon, to rank as such from July 27, 1904. August 30, 1904.

Official.

WALTER WYMAN,
Surgeon General.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ending September 14, 1904:

- PURVANCE, GEORGE, Assistant Surgeon General--Granted extension of leave of absence for one month from September 1, 1904, on account of sickness. September 9, 1904.
- VAUGHAN, G. T., Assistant Surgeon General--Detailed to represent the Service at meeting of the Association of Military Surgeons, to be held at St. Louis, Mo., October 10-15, 1904. September 7, 1904.
- PECKHAM, C. T., Surgeon--Granted leave of absence for one month from October 8th. September 10, 1904.
- WERTENBAKER, C. P., Surgeon--Detailed to represent the Service at the meeting of the Association of Military Surgeons, to be held at St. Louis, Mo., October 10-15, 1904. September 7, 1904.
- WICKES, H. W., Passed Assistant Surgeon--Directed to proceed to Wilmington, Del., for special temporary duty. September 8, 1904.
- PARKER, H. B., Passed Assistant Surgeon--Granted leave of absence for one month from October 1st. September 13, 1904.
- ROBERTSON, H. MCG., Assistant Surgeon--Temporarily relieved from duty at Stapleton, N. Y., and directed to proceed to Washington, D. C., and report at the Bureau for temporary duty. September 10, 1904.
- RUCKER, W. C., Assistant Surgeon--Granted leave of absence for fourteen days from September 15th. September 12, 1904.
- GOLDSBOROUGH, B. W., Acting Assistant Surgeon--Granted leave of absence for three days from September 8th. September 8, 1904.
- HORSEY, J. L., Acting Assistant Surgeon--Granted leave of absence for fourteen days from September 10th. September 10, 1904.
- MASON, W. C., Assistant Surgeon--Granted leave of absence for five days from September 19th. September 9, 1904.
- STEVENSON, J. W., Acting Assistant Surgeon--Granted leave of absence for seven days from September 3, 1904, on account of sickness. September 14, 1904.
- TUTTLE, JAY, Acting Assistant Surgeon--Granted leave of absence for seven days from September 12th. September 10, 1904.
- GOODMAN, F. S., Pharmacist--Granted leave of absence for three days from September 3, 1904, under Paragraph 210 of the regulations.
- SCOTT, E. B., Pharmacist--Granted leave of absence for twenty five days from September 19th. September 12, 1904.
- SLOUGH, CHAS., Pharmacist--Department letter of August 3, 1904, granting Pharmacist Slough leave of absence for thirty days from August 10th, amended to read nine days from August 17th. September 12, 1904.

RESIGNATION.

Pharmacist W. W. Kolb resigned to take effect September 1, 1904.
Official.

A. H. GLENNAN,

Acting Surgeon General.

Official list of the changes of stations and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ending September 21, 1904:

- GASSAWAY, J. M., Surgeon--Detailed to represent the Service at the meeting of the Association of Military Surgeons at St. Louis, Mo., October 10-15. September 15, 1904.

- CARMICHAEL, D. A., Surgeon--Granted leave of absence for one month from October 18th. September 21, 1904.
- WHITE, J. H., Surgeon--Granted leave of absence for six days from September 19th. September 17, 1904.
- MCINTOSH, W. P., Surgeon--To proceed to Stonington, Me., for special temporary duty. September 15, 1904.
- WOODWARD, R. M., Surgeon--Department letter of May 13, 1904, granting Surgeon Woodward leave of absence for three months, amended to read two months and twenty-six days from June 14th. September 16, 1904.
- STONER, J. B., Surgeon--To proceed to Cape Charles Quarantine Station and assume temporary charge during the absence of Assistant Surgeon J. S. Boggess. September 15, 1904. Granted leave of absence for eight days from September 26th. September 21, 1904.
- WERTENBERGER, C. P., Surgeon--Upon being relieved from duty at New Orleans, La., by Passed Assistant Surgeon A. C. Smith, to proceed to the Immigration Depot, Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty. September 15, 1904.
- SMITH, A. C., Passed Assistant Surgeon--Upon being relieved from duty at New York (Stapleton), by Passed Assistant Surgeon J. A. Nydegger, to proceed to New Orleans, La., and assume command of the Service, relieving Surgeon C. P. Wertenbaker. September 15, 1904.
- NYDEGGER, J. A., Passed Assistant Surgeon--Relieved from duty at the Immigration Depot, Ellis Island, N. Y., effective October 1, 1904, and directed to proceed to New York, N. Y. (Stapleton), and report to the Medical Officer in command for duty and assignment to quarters, relieving Passed Assistant Surgeon A. C. Smith. September 15, 1904.
- FOSTER, M. H., Passed Assistant Surgeon--Granted extension of leave of absence on account of sickness, for thirty days from September 18th. September 20, 1904.
- MCLAUGHLIN, A. J., Assistant Surgeon--Granted leave of absence for twenty-four days from October 3d. September 15, 1904.
- HAMILTON, H. J., Acting Assistant Surgeon--Granted leave of absence for thirty days from October 1st. September 17, 1904.
- RICHARDSON, S. W., Pharmacist--Relieved from special temporary duty in connection with the Louisiana Purchase Exposition at St. Louis, Mo., and from duty in the Hygienic Laboratory, Washington, D. C., and directed to proceed to Boston, Mass., and report to the Medical Officer in command for duty and assignment to quarters. September 15, 1904.
- LAGRANGE, J. V., Pharmacist--Department letter of August 30, 1904, granting Pharmacist LaGrange leave of absence for twenty-three days from September 15th, revoked. September 15, 1904.
- KEEN, W. H., Pharmacist--Bureau order of August 26, 1904, directing Pharmacist Keen to proceed to Boston, Mass., revoked, and directed to proceed to Chicago, Ill., and report to the Medical Officer in command for duty and assignment to quarters. September 15, 1904.

REINSTATEMENT.

C. H. Bierman, of New York, reinstated as Pharmacist of the third class. September 17, 1904.

BOARD CONVENED.

Board convened to meet at Stapleton, N. Y., September 19, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon A. C. Smith, Chairman; Passed Assistant Surgeon C. H. Lavinder, Recorder. Official.

A. H. CLENNAN,
Acting Surgeon General.

PATENTS GRANTED.

JUNE 14, 1904.

- 762,366. Urethrotome, Wm. E. Washburn, Kewanee, Ill.
- 762,555. Combined Brace and Suspensory, Alexander C. Rankin, Chicago, Ill.
- 762,603. Hypodermic Syringe, Chas. Witkowski, Boston, Mass.
- 762,643. Appliance for Treatment of Disease, Eleanor A. Learman, Cleveland, Ohio.
- 762,743. Cervical Director, Chas. W. McDade, Ceylon, Minn.
- 762,822. Fastening Device for Artificial Limbs, Jas. E. Hanger, Washington, D. C.
- 762,832. Physical Development Apparatus, Kilion L. Minges, Rochester, N. Y.

JUNE 21, 1904.

- 762,881. X-Ray Apparatus, Wm. B. Churcher, Cincinnati, Ohio.
- 763,081. Applicator, Ezra E. Tope, Scio, Ohio.
- 763,304. Surgical or Operating Pad or Cushion, Christian W. Meemecke, Jersey City; Daniel Hogan, Hoboken, N. J.

JUNE 28, 1904.

- 763,396. Veterinary Surgeon's Forceps, John F. Hemphill, Arlington, Oregon.
- 763,657. Electrical Apparatus for Therapeutical Purposes, John P. Brown, Rogers, Ark.
- 763,683. Combined Abdominal Hernia Pad, Anthony E. Majoris, Binghamton, N. Y.
- 763,765. Cabinet for Treatment of Hemorrhoids or Other Diseases, Benj. F. Johnson, Ill.
- 763,814. Mechanical Appliance for Cure of Headache, Eljah A. Turner, Calcis, Ala.

JULY 12, 1903.

- 764,546. Lung Tester, Henry Bardsley, Palmyra, N. J.
- 764,564. Injection Syringe, Albert Dreyer, Cologne, Germany
- 764,678. Medical Tablet, Louis Rosenthal, Montreal, Canada
- 764,681. Surgeon's Operating Table, S. G. Scanlan, Chicago, Ill.

AUGUST 2, 1904.

- 766,203. Hypodermic Syringe, Ralph Walsh, Washington, D. C.
- 766,204. Hypodermic Syringe, Ralph Walsh, Washington, D. C.
- 766,336. Vaginal Irrigator, Chas. O. Farrington, Palestine, Texas.
- 766,344. Packaging of Medicine for Hypodermic Purposes, Herman H. Hager, Detroit, Mich.

AUGUST 16, 1904.

767,593. Massaging Implement, Alva U. Patchen, Syracuse, N. Y.

767,686. Hypodermic Syringe, Henry J. Detmers, Columbus, Ohio.

AUGUST 30, 1904.

768,721. Electrode for Therapeutical Purposes, Wm. B. Bassell, Columbus, Ohio.

LINES ON A SKULL.

Behold this ruin : 'twas once a skull,
 Once of ethereal spirits full ;
 This narrow cell was life's retreat,
 This space was thought's mysterious seat.

What beauteous visions filled this spot,
 What dreams of pleasure long forgot ;
 Nor hopes, nor love, nor joy, nor fear,
 Have left one trace of record here.

Beneath this mouldering canopy
 Once shown the bright, and busy eye,
 But start not at the dismal voice
 If social love that eye employs.

If with no lawless fires it gleamed,
 But through the dew of kindness beamed
 That eye shall be forever bright
 When stars and sun are sunk in night.

Within this hollow cavern hung
 The ready, swift and tuneful tongue
 Of falsehood ; honest it disdained,
 And when it could not praise was chained.

If always in virtue's cause it spoke,
 The gentle concord never broke,
 This silent tongue shall plead for thee
 When times unavails eternity.

Say, did these fingers delve the mind,
 Or from the envials rubies shine ?
 To hew the rocks or wear the gem
 Can little now avail to them.

Avails it whether bare or shod
 These feet the path of duty trod ;
 Oft from the paths of ease they fled,
 Or visit affliction's humble shed.

But if the page of truth they sought,
 Or comfort to the mourners brought
 This hand a richer need shall claim
 Than all that waits on wealth or fame.

If granduer guilty tried their presence,
 And home to virtue's cot return,
 Those feet with angels' wings shall vie,
 And tread the place of the sky.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

VOL. XXXVIII. LOUISVILLE, KY., OCTOBER 15, 1904. NO. 158.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

GONORRHEA OF THE PROSTATE.*

BY VICTOR N. MEDDIS, M.D.

This complication appears very early, much earlier, in fact, than is ordinarily accepted. In many cases, despite the absence of subjective symptoms, and despite absolutely clear second urine, the prostate will upon examination be found diseased. It is claimed by Frank, of Berlin, that he has found the prostate diseased as early as the eighth day after the first appearance of gonorrhea. He also claims that if gonococci persist from the third to the fifth day after an acute urethritis has come under treatment, and if no complications have appeared, and when the urethral mucosa has no para-urethral passages or congenital deformity, that he suspects an extension of the gonorrheal process to the prostate whether the second urine is clear or not. The involvement of the prostate by the gonorrheal process can, I think, be prevented by therapy only in certain cases, but I do think that proper therapeutic measures will enable us to limit its frequency.

An early and positive diagnosis of gonorrhea of the prostate is very essential, and can only be made upon the microscopical and bacteriological finding and upon digital examination per rectum. In order to render the microscopical examination as free from objections as possible I think it advisable to first wash the anterior and posterior urethral thoroughly with a normal salt solution, an even better, perhaps, with

* Read before the Louisville Medical and Surgical Society.

a protargol solution. After this has been done insert a sterile endoscopic tube to the end of the membranous urethra, cleaning the mucosa to absolute dryness. Staining the secretion obtained by massage with methylene blue will, in the majority of cases, be found quite sufficient, but in doubtful cases it is better to stain by the gram method. Owing to the anatomical construction of the prostate the pathological conditions induced by gonorrhea are of a complex nature. This will explain the difficulty of treatment in these cases.

In keeping with the greater or minor cystic changes induced by catarrh in the gland ducts in relation to the occlusion of their mouths the success of the treatment must depend. Virulent gonococci maintain a copious secretion, keeping open distended gland ducts, evacuation of the ducts succeeds with more or less rapidity. The gonococci, if its virulence is diminished, may be present for years in the gland without producing marked symptoms. The inflammatory process gradually contracts or eventually occludes the duct orifices which materially hinders the evacuation of the gland. This anatomico pathological state shows plainly that successful treatment can rest exclusively upon mechanical evacuation of the gland. This treatment could best be performed by the physician's finger were it possible with the finger to reach the most peripherally situated gland, but as the finger is too short for this, other instruments must be employed. All rigid instruments, such as proposed by Finger and others, are inadequate and may prove harmful in many cases. In my opinion the best of the many instruments now on the market for this purpose is the one devised by Dr. W. R. Blue, of this city. This instrument is merely a rubber finger, so to speak, which fits over the finger of the physician. Massage of the prostate should always be followed by washing the anterior and posterior urethra to remove the expressed secretion. The solution used for this irrigation must vary in accordance with the microscopical findings; if gonococci are found, nitrate of silver or some one of the many silver salts can be employed. If other bacteria are found a mild solution of bichloride of mercury is best, and if the secretion is aseptic any mild astringent solution can be employed. In acute inflammatory conditions of the prostate which tend to rapid abscess formation massage of the prostate must never be employed. In those cases rest in bed is the most essential. The diet must be regulated, the bowels kept well open in order to relieve the congestion, hot baths, and, where it is possible, heat applied direct to the prostate. It is my belief that if an early and correct diagnosis of

gonorrhea of the prostate be made, hypertrophy of the prostate will be frequently met with.

LOUISVILLE, KY.

SPONTANEOUS FRACTURE OF THE RIBS, WITH REPORT OF CASE.

BY DR. HUGH D. RODMAN.

GENTLEMEN—Fractures of the ribs occur very much more frequently now than they did a half century ago. Our improved means of transportation render us more liable to injury. When we gave up the ways and means of our grandfathers, the tramp to church, to election or to muster, or the safe and slow ox team, when the entire family had to go, for the more rapid and less safe buggy, surrey, bicycle, automobile and railroad coach, we bought injury and paid for it in luxury. Our remote ancestors in medicine rarely ever saw a broken rib; so rare was this accident that a country doctor often passed a long and useful professional career without being called to adjust such an injury. Such now is not the condition of things. The reasonably busy country doctor is almost annually called to some one of his patients hurriedly, and on his arrival finds that his patient has been out driving one of the safest and gentlest horses in the world, but on that occasion met an automobile, and the old family horse wheeled, reared, overturned the buggy and ran, and the occupant had one, two or three ribs broken. This is the picture of a common occurrence now-a-days. But I do not intend to consume your time by speaking of these every day injuries. It is one very much more uncommon, and one which the surgeon even may not encounter in a lifetime. This is the fracture of ribs by voluntary muscular contraction, or as I say in my title, the "spontaneous fracture of the ribs."

This injury seems to have been so seldom seen that many of our writers on surgery scarcely notice it.

Gross, passes this subject with the following short sentence: "A rib has occasionally been broken by mere muscular contraction in the act of coughing and sneezing, but such an occurrence is unusual, and implies an abnormal condition of the osseous tissue."

Erichsen says: "In some rare cases the ribs have been known to be broken by violent contraction of the abdominal muscles during parturient efforts."

Wyeth says : " There is a not infrequent condition of fragility in the bones of the insane, which either alone or together with excessive or uncontrollable muscular action renders them liable to break."

American Text Book : " The common cause is external violence, but it may also be caused by muscular action, especially in coughing."

Holmes, in his " System of Surgery," after giving the causes of the fracture of ribs, says : " But in some very rare instances, the ribs have been proved to be fractured from internal causes, viz. : during severe efforts of coughing. In these latter instances the ribs have generally been found to be in some morbid condition. In enumerating the morbid states to be found in connection with subcutaneous fractures, senile atrophy, malignant diseases, tumors of other kinds, including hyatids, the ulceration of which accompanies necrosis, are given in the order named. But besides these, cases of subcutaneous fracture occur without known cause."

Senn says : " A pseudo or false fracture is a solution of continuity of a bone, which occurs independently of a traumatic force sufficient to fracture a bone of normal structure and resistance. Such injuries have been described as spontaneous fractures, an erroneous designation, as the fractured bone is always found the seat of the disease, the break being caused by muscular contraction or an insignificant injury. The terms pseudo fracture and pathologic fracture are more appropriate, as they indicate the existence of an antecedent pathologic condition at the seat of solution of continuity. And the occurrence of the latter under the influence of a slight or non-appreciable mechanical cause."

Serious mistakes are often made in the treatment of these fractures by concentrating the entire attention to the mechanical of the false fracture, and by failure to recognize and carefully to diagnose the true condition of the bone. The fracture constitutes only a complication of the bone affection, which may be general by involving many or all of the bones, or may be confined to a single bone. In such cases the bones become fragile, as in senile osteoporosis, which renders the bone structure brittle and easy of solution. Osteomyelitis is also a cause of spontaneous or pathologic fracture, and occurs in two forms, diffuse and circumscribed. In the acute diffused variety of osteomyelitis spontaneous fracture may occur when the entire thickness of the shaft of a long bone is destroyed by the suppurative inflammation, and the formation of an involucrum fails to take place or is retarded by extensive or complete destruction of the periosteum. I have seen one case of this type of fracture, which was in a femur. Osteomyelitis affects the ribs

less frequent than other bones, hence they are less liable to be broken from this cause. Yet the ribs seems more liable to an inexplicable fragility than the long bones, and yield more readily to muscular contraction or to insignificant causes than other bones.

Rachitis is also a most frequent cause of spontaneous fracture. In this disease the bones are greatly softened, and the entire skeleton is more or less concerned. But in the case at hand no bone disease can be made out.

On August 24, 1903, I was called in the early morning to see Mrs. E. H. White, aged fifty-one years, mother of seven children, a farmer's wife and possessed of unusual activity, and a generally healthy appearance. On arriving I found the patient in bed, complaining of severe pain in the left side; pulse and temperature normal; respiration short and slightly hurried. Auscultation revealed crepitation, and palpation showed that two ribs were broken, the fifth about 2½ or 3 inches from its posterior end, and the seventh near sternal end. On inquiry I found that she had retired the night previous feeling as well as usual, and in turning during the night she was seized with pain, which continued until the chest was well supported by a bandage. Union was as quickly found as it usually is in a fracture from direct violence, when the first dressing was removed. I had applied as a preventive or a safeguard against such troubles a neatly fitted jacket, extending from the lower ribs to the armpit, and fastened over the shoulders, which is worn both day and night. In getting at the history of this case she reported that this was the eleventh rib or eleventh rib fracture which she had sustained in about as many years. She did not remember the circumstances connected with a number of the first fractures, but the next two previous to this she did remember. The first of these two occurred about two years before this, when she with an ordinary dipper was reaching into a water barrel to get a dipper of water, and while slightly stooped and a little twisted or leaning to one side a rib gave way; the second one occurred some months after this. She was passing her hand through a joint or crack in a small gate to loosen the chain on the opposite side, and when in this same leaning position she felt the sting of pain, and a rib was broken. To look at this woman you would consider her a comparatively healthy woman, and her family history is good. There is absolutely nothing in her history, her habits or environments that would lead you to suspect such osseous fragility. Her children are now well grown up and are healthy. Taking the case as I see it, it was of great interest, and I deemed it worthy of a

report and the consideration of my associates in surgery and medicine ; hence I have taken the liberty to trespass on your valuable time with this short paper.

PROPHYLAXIS.*

BY CHAS. MOIR, A.B., M.D.

*Assistant to the Chair of Physiology and Clinical Instructor in the Chair of Pediatrics
Kentucky School of Medicine, Louisville, Ky.*

The honor conferred upon me by this Society to read a paper to-night is certainly appreciated by me. Fully realizing that so many able writers of this Society have preceded me at different times, and have given us papers of such sound logic and good advice, that I feel that the task given me to-night can not come up to the standard of my predecessors. But, however, when we do the best we can and to the best of our ability, nothing more can be expected. My subject to-night, gentlemen, "The Prophylaxis of Disease," is of such wide range that volumes could be written and still the entire field not covered, so I will attempt to briefly cover the field of some of our own domestic diseases, or those that the physicians of Louisville come in daily contact with, confining myself, as far as possible, to the prevention of disease and not to the treatment.

We, as members of the noblest profession on earth, know that we can do more good to the human family by preventing diseases than we can by curing them ; by statistics we know that one-tenth of all deaths in America is caused from tuberculosis alone. Now, what can the physician do to prevent this awful scourge? First, by educating the laity to the fact that tuberculosis is usually contracted through the medium of dried sputa, air borne. When the sputa ejected from the lungs or throat of a tuberculosis patient is carelessly cast upon the sidewalks or streets, it quickly dries, and then the microscopic particles are taken up by the currents of air, and these, if inhaled by persons whose systems are in a receptive condition produces the disease. For we all know that the tubercle bacillus thrives and multiplies, not outside the body, but rapidly does so inside the body. When conditions are favorable for their habitation, it has been computed that millions upon millions of bacilli are cast off in the course of a day by a single

Read before the Louisville Society of Medicine at their regular meeting, held at the Galt House, October 3, 1904.

tuberculous patient ; hence the importance of instructing our tuberculous patients to promptly destroy all sputa, as it is not the moist, but the dry sputa, that no doubt spreads the disease. The clean tuberculous patient is not usually dangerous, hence the importance of prophylaxis is again demonstrated. In many of our large cities the health departments are not allowed sufficient funds to carry on prophylactic work. In our own city we have one of the best health officers in this country, Dr. M. K. Allen. But our City Fathers (although they have been liberal to a degree) have not, in my judgment, given our Health Department the necessary financial assistance. All of our schools, both public and private, ought to be subjected to medical inspection at least twice each week, for we all know that one child infected with any of the infectious diseases could contaminate the entire school in a short time.

The medical profession of our city should go united together for any measures that will promote the health of our citizens, regardless of our political opinions. One of the greatest sources of spreading disease is poor sewerage. I understand that in the near future a question of a bond issue for sewer purposes will be voted upon by the voters of our city. We ought to support this, both individually and collectively, as by improving the sewerage system of our city we thereby promote the health of our citizens. This is again prophylaxis.

How much easier it is to prevent than to cure puerperal septicemia. I have never yet had a case of it in my own practice. How much easier, too, it is to prevent pneumonia, diphtheria, scarlet fever, malaria, tetanus, small-pox, syphilis, gonorrhea, and almost any disease that we daily come in contact with.

I do not believe that there is another profession that will advocate means of taking dollars out of their pockets as do the doctors of the world. We do this every day of our lives by applying our knowledge of preventing disease.

Take a case of typhoid fever. If we do not thoroughly disinfect the stools, the entire family would hardly escape the disease. Our case, too, of diphtheria. What physician who regards the health and welfare of those under his professional care would think of leaving the diphtheric room and go into another house where the disease did not exist without first thoroughly disinfecting himself? This rule I invariably apply in my own practice and in my college work, where I am connected with the Department of Pediatrics. I always forcibly impress upon our students the importance of prophylaxis.

The majority of human beings, just as long as the delicate and intricate mechanism of our bodies continues to work, never think of repairs or rest. What prosperous, progressive manufacturer, whose plant contains a lot of expensive machinery, that would think of running any one of these machines until they needed repairs? No, indeed. You will find in all such manufactories expert mechanics whose duty it is to look over these machines, and see if they need adjusting or repairing of any kind. We, as doctors, represent the mechanic and ought to teach our patrons the above facts, thereby keeping off disease, thus again applying our prophylactic knowledge.

I know, gentlemen, that few of our patrons come to us when in perfect health (except at long intervals to pay a bill). But if we could educate them to the fact that very little danger, if any, can possibly exist to make them susceptible to disease if the blood is normal, and this can only be determined by the physicians, that numbers of diseases that now exist would be prevented. I believe that if our patrons would have their urine examined, say once each month, and the blood once every two months, that it would give the physician a better chance to ward off disease, for I do believe that if we have normal blood and urine that we are not susceptible to any of the acute diseases.

The argument might be advanced that we could not get our patrons to pay for these examinations when seemingly in perfect health. Any objections along this line could, I believe, be overcome by educating them to the fact that it is easier to prevent than to cure disease. It is, I understand, a common condition in parts of Europe to pay the physician only while the patient is well, never when they are sick, and it is said, if true, that such patients seldom get sick. Why? Because I believe that the doctors there apply the art of prophylaxis, and are paid well for that knowledge. There is scarcely any limit to the title of this essay. For what is more soothing to the overworked physician than to receive good compensation for his faithful services? It is a prophylactic to him. Again thanking you for this honor, and hoping to hear a full and free discussion here to-night.

Progress of

Medical and Surgical Science.

Medical Treatment of Deep-Seated Hemorrhage.—Francis Hare reports five cases of hemoptysis occurring in patients which were stopped instantaneously by the use of amyl nitrite inhalations.

Hemorrhage depends essentially upon the existence of certain blood pressure in the bleeding area, and the indication for medical treatment consists in reducing this localized blood pressure, and this might be achieved by promoting vasomotor constriction of the arterioles supplying the bleeding area, or by promoting fall of blood pressure through widespread vasodilation in other areas. It is to this latter that he directs his attention.—*Pacific Medical Journal*.

Gangrene of the Nipples in the Puerperium After the Use of Orthoform.—In the report on the progress of obstetrics made to the *Boston Medical and Surgical Journal* of January 29, 1904, by Dr. Frank A. Higgins, he mentions the possibility of gangrene of the nipple developing as the result of the use of orthoform, and has the following opinion to express in regard to a case reported by Vincent:

Four years ago, in this department, there were reported some instances in which orthoform was used for fissures and cracks of the nipples in nursing women. At that time orthoform was recommended as an antiseptic powder and also as a local anesthetic. Orthoform was declared to be perfectly harmless for external use and absolutely non-toxic for the baby.

A case has been recently reported by Vincent in which orthoform was used for excoriated nipples, and the nipples also protected by rubber shields. Some days after its use the whole front of the breast became covered by a dark red rash, the skin infiltrated, edematous, and very tender, and the question of erysipelas was raised, as there was a slight resemblance to this disease. The patient's general condition, however, there being no constitutional symptoms except pain and slight headache, quite excluded erysipelas. The nipples became grayish black in color with absence of sensation, and soon became definitely gangrenous. The rash extended to the chest, the back, and also to the buttocks. Both nipples sloughed, and healing occurred slowly by

granulation. The author says it is impossible to prove the cause of the gangrene, but he believes it to have been due to the orthoform, as such a rash is well known to those who use orthoform in general surgery. In a letter to the *Lancet* of April 12, 1902, the writer, George Pernet, in referring to Vincent's case, believes there is no doubt that orthoform was the cause of both the rash and the gangrene, as several instances of the latter complication have been recorded.

Since its introduction the reporter has used orthoform a considerable number of times for fissure of the nipples, and has known of its use in many other cases, and without any harmful effect. He has usually used it in alcoholic solution, however. It would seem, therefore, that its use in powder form at least is not without danger.—*Therapeutic Gazette*.

Hot and Cold Water in Eye Diseases.—Nance states in the *Medical Standard*:

1. Heat and cold are best applied to the eye by moist pads. They are more efficacious when applied in this manner than by means of the coil or bladder, in that their action is more penetrating, and their effect is more germicidal.

2. The application of heat is indicated in degenerative corneal processes—interstitial and phlyctenular keratitis, corneal ulcers, pannus, infected corneal wounds, hyphemia, hypopyon, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the eyelids ("black-eye") to hasten absorption of extravasated blood.

3. The application should be of the highest temperature the patient can endure, viz., 110° to 115° F.

4. They should be employed for a period of fifteen minutes, and repeated at intervals of two or three hours, for many hours.

5. Cold is indicated in hyperemia and inflammation of the conjunctiva. In purulent conjunctivitis it is the remedy *par excellence*. In traumatism, especially those of the iris and lens, and in the early treatment of contusion of the lids, its employment is of value.

6. In purulent conjunctivitis iced applications may be continuously used for many hours so long as the cornea remains unimpaired, in which instance they are positively contraindicated.

7. Hot applications greatly assist the rapid absorption of various medicaments employed in ophthalmic practice, and when used for this purpose should immediately precede the instillation of such solutions.

Dr. William B. Doherty, Lecturer on Obstetrics in the University of Louisville, recited in his introductory lecture to the students of that institution, on the 28th of September, the following poem, composed by him, on the "Mother's Pelvis:"

THE MOTHER'S PELVIS.

Behold this ruin ! 'Tis a bony bowl ;
Around its brim we once were wont to roll,
To toss and turn 'mid amniotic spray,
Whilst waiting, restless, for our natal day.
In like, we dwelt for nine long months or more,
Till launched with pain upon this pubic shore.

Within this realm we had a gen'rous home,
Supplied were all our needs within the womb ;
Fed wondrously, without a breath of air,
From mother's heart, and with a mother's care
By cord secured, we gamboled in our sphere,
Oft mother's joy, more often mother's fear.

Through narrow straits we came; our progress slow,
The womb contracts ; the floor resists below ;
A pain, a rest, a pain yet more severe ;
A wail, a cry, an eye bedewed with tear ;
Our mothers suffered this, in travail's throe
While pressed and forced we came for weal and woe.

Dynamic pelvis ! (now an empty bowl),
Is where was joined a body to a soul.
Soon mother's love forgets a mother's pain,
Who finds her solace in her offspring's gain,
Full glad a child she's given to the world,
With high and lasting destiny unfurled.

But what is life ? A cell the secret holds,
The oosperm small, how great what it unfolds !
It's certain life commences in a cell ;
Just how ! just when ! what scientist can tell ?
Life's product fills a whole world's history,
Though life itself remain a mystery.

Is life not power ? Fount of joy and glory,
May no one's life appear an empty story,
Be this our purpose, this our constant aim,
To strive for record on the scroll of fame,
And, as physicians, nobly do our part,
Bring no disgrace on this obstetric art.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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S. B. HAYS, M. D., Manager.

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

THE STUDY OF PHARMACOLOGY.

Glad we are that there is no relenting on the part of any when it comes to the desire to progress in medicine. No doubt the most laudable trait of medical men is that there is never any opposition to some move toward more scientific methods, more rational means of treatment and conservatism. One of the many progressive movements is the study of pharmacology as a preliminary study to therapeutics. Certain it is that if a practitioner knows just how a drug will act on living tissue and repeated experiment will prove its stability of action, he goes home from his case with a pretty sure conviction that his agent can do naught but its physiological action, and feels satisfied with his remedial selection.

Such men as Cushny, Crile and Sollman have done a great deal with giving us a better knowledge in this respect, and Crile has proven

that we sometimes tetanize our patients with strychnine, inhibit peristalsis in our post-operative abdominal cases, and enhance the retention of flatus with morphine, and by their action on animals have taught us the more conservative doses of our most common drugs.

Our lives hinge on a chemical or physical basis, and that holds good with the classification of the action of drugs. For a drug or agent either acts by its chemical affinity for certain forms of tissue and is called its ion action, or it has a salt or osmotic action. Strychnia, for instance, has an affinity for nerve tissue of the medulla spinalis, and that action is stimulation and is called its ion action, rendering the passage of impulses more facile. Whereas, this action is so strong that although strychnine has a salt action on a permeable animal membrane, in the living body the patient would be dead before its salt action was manifest. Sodium chloride solution of about .75 per cent. is isotonic with the blood serum; hence we utilize it when there is loss of blood and consequent weak pulse and tension, and we may put this Na cl sol. in the rectum or under the skin. And again, when magnesium sulphate is given in concentrated form (as it has to be for its purgative effect), it extracts an abundance of water all along the alimentary tract and by increasing the liquidity of the feces, is rightly called a hydrogogue cathartic. All this is salt action, and not an atom of that $Mg SO_4$ gets into the blood stream or is absorbed.

In conclusion, can it not be plainly seen that when once you are well versed in pharmacology you are easily a therapist? And although we do not know the exact physiological action of all drugs, giant strides have surely been made in this study recently, and the subject certainly merits the attention of all practitioners.

MEDICAL DEPARTMENT OF THE LOUISVILLE PUBLIC LIBRARY

The following was selected by the Louisville Clinical Society, and presented to the Board of Trustees of the Louisville Public Library:
To the Honorable President and Members of the Board of Trustees of the Louisville Free Library:

GENTLEMEN—The Louisville Clinical Society, which has the advancement of medical knowledge and the good of mankind as its motto, at a recent meeting, by unanimous vote, appointed the undersigned a committee to present to your honorable body the claim of the

medical profession to recognition in your collection of the books and periodicals which go to make up a library of true worth.

First—We would respectfully represent to your honorable body that there are many physicians to whom it is a hardship, and often a deprivation to their families, to provide a full line of medical books and periodicals which are so necessary as a source of information to enable the doctor to contend with all the ills incidental to human life.

Second—We think it is not necessary to say more than to refer briefly to the good which will result to the high, low, rich and poor alike without distinction, should our wish be granted, and therefore we respectfully request that a complete medical section be provided which will be a source of information to physicians and an aid in their efforts to prevent and cure disease.

JOSEPH W. IRWIN, M.D.,
T. P. SATTERWHITE, M.D.,
J. A. FLEXNER, M.D.

Book Reviews.

Handbook of the Anatomy and Diseases of the Eye and Ear. For Students and Practitioners. By D. B. St. John Roosa, M.D., LL.D., Professor of Diseases of the Eye and Ear in the New York Post Graduate Medical School; formerly President of the New York Academy of Medicine. Etc., and A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post graduate Medical School; Fellow of the New York Academy of Medicine. 300 Pages, Square, 12mo. Price, Extra Cloth, \$1.00, net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

The compilation of this useful little book represents the work of a Kentuckian, and should be of especial interest to the readers of *THE AMERICAN PRACTITIONER AND NEWS*. Dr. Davis, who was graduated from one of the Louisville Colleges of Medicine and afterwards served a year as interne in the Louisville City Hospital, subsequently devoted himself to the study of diseases of the eye, locating in New York. The position he holds there is evidence of the success he has achieved. In his extensive experience as a teacher he has been enabled to select just such information about the diseases of the eye and ear as would interest the student and practitioner of general medicine. His idea has been, as he states in his preface, to give the matter in such a succinct form that in a very short space of time observations in the clinic can be corroborated and amplified.

The work, though small (186 pages), treats of all the recognized diseases of the eye and ear, and serves admirably the purpose of students who can not spare the time to read the lengthy treatises of the larger text books. The busy practitioner would also find use for a handbook of this kind.

The publication has, judging by its size and condensed form, evidently the advantage of being inexpensive. This, with the completeness and brevity of the text, should insure for it a good sale.

ADOLPH O. PFINGST.

Kirke's Handbook of Physiology. Revised by Frederick C. Busch, B.S., M.D., Professor of Physiology Medical Department University of Buffalo, Fifth American Revision, with 535 illustrations, including many in colors. New York: Wm. Wood & Co., 1904.

In a review of the fifth edition of "Kirke's Physiology" it is unnecessary to do more than to comment on the changes and additions, since its previous editions and revisions have caused it to be well known

throughout the medical world as an excellent and reliable text book. Changes have been made throughout the book in order to conform to well established advances in the various fields of physiology. The text has been condensed in places and elaborated in others, where it has been advisable for the better elucidation of the subject matter.

The chapters most affected are those on blood, circulation, respiration, food and digestion.

The cuts are plain and explicit. The many good characteristics of this book has established it as the students' text book in medical colleges.

Manual of Childbed Nursing, with Notes on Infant Feeding. By Charles Jewett, A.M., M.D., So.D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. Price, \$0.80. New York: E. B. Treat & Co., 1902.

This is an excellent manual for not only nurses, as was originally designed, students and recent graduates in medicine, but also young mothers and all wishing a good smattering in obstetrics. Dr. Jewett's name in connection with this little book is sufficient to guarantee its value. Beside obstetrical nursing it contains a chapter on infant feeding in concise form, and well adapted for nurses and mothers use. We are glad to recommend it.

The Nature of Man, Studies in Optimistic Philosophy. By Eli Metchnikoff, Professor at the Pasteur Institute. The English Translation, Edited by P. Chalmers Mitchell, M.A., D.Sc. Oxon., Secretary of the Zoological Society of London. New York and London: The Knickerbocker Press, 1903.

Humanity, in its misery, has put question after question to science, and has lost patience at the slowness of the advance of knowledge, but science, confident of its methods, has quietly continued to work. Little by little answers to some of the questions that have been settled have begun to appear.

Eli Metchnikoff, the distinguished disciple of Pasteur, an expert of experts in the science of life, after forty years of patient devotion and brilliant research, this wonderful thinker, has given to the world not only the most plausible theory of immunity, describing the functions of the phagocyte, demonstrating them wandering out into the vessels of the hair follicle, there absorbing its pigment and causing the hair to turn white, offering as a theory that the white blood cell hypertrophies in old age, and not finding sufficient nutrition attacks the more

important organism, causing decay or senility ; but not satisfied, has addressed himself, in "The Nature of Man," to the grandest and most serious problems of humanity, to life, and sex, and death, and fear of death, dealing with problems and difficulties that every age in the history of man has had to face, considering facts of the constitution of man in the most serious manner, explaining mysteries of the flesh and of the spirit of which all existing explanations have failed to satisfy humanity.

Part I deals with the disharmonies of man.

Part II attempts to diminish the ill^u arising from the disharmonies of the human constitution.

And Part III considers what science is able to do to alleviate the disharmonies of the human constitution.

Moving step by step, passing from the simple to the complex, and from the particular to the general, science has established a set of truths which all the world must accept. But the best answer, in the words of Metchnikoff, that science can give to the time-worn question, "Whence do we come?" is "that man is a kind of miscarriage of the antropoid ape, endowed with profound intelligence and capable of great progress."

The author, in offering this work, has soared far above the common people, and appealed to the scientist and biologist ; he has ventured into unexplored grounds and marked the way for further research.

Metchnikoff concludes with the statement that, "If there can be formed an ideal able to unite men in a kind of religion of the future, this ideal must be founded on scientific principles ; and if it be true, as has been asserted so often, that man cannot live by faith alone, the faith must be in the power of science."

BOOKS RECEIVED.

Dwight's Epitome of Toxicology. A Manual for Students and Practitioners. By E. W. Dwight, M.D., Instructor in Legal Medicine, Harvard University. In one 12mo. volume of 298 Pages. Cloth, \$1.00, net. Lea's Series of Medical Epitomes. Edited by V. C. Pedersen, M.D. Philadelphia and New York : Lea Brothers & Co., Publishers, 1904.

Text Book of Nervous Diseases and Psychiatry. For the Use of Students and Practitioners of Medicine. By Chas. L. Dana, A.M., M.D., Professor of Nervous Diseases and (ad interim) Mental Diseases in Cornell University Medical College ; Visiting Physician to Bellevue Hospital ; Neurologist to the Montefiore Hospital, ex President of the

American Neurological Association; Corresponding Member of the Societe de Neurology, Etc. Sixth Revised and Enlarged Edition. Illustrated by 24 Engravings and Three Plates in Black and Colors. Price, \$4.00, net. New York: Wm. Wood & Co., 1904.

The Woman's Home Library. Edited by Margaret E. Sangster. Beauty Through Hygiene, Common Sense Ways to Health for Girls. By Emma E. Walker, M.D., Member of the New York Academy of Medicine, Etc. Illustrated. New York: A. S. Barnes & Co., 1904.

Bulletin of Health Department of the City and County of San Francisco, Cal., for September, 1904. A Pamphlet. San Francisco: Commercial Publishing Company.

Vital Statistics of the City of Chicago for the Years 1899 to 1903 Inclusive. Issued by the Department of Health. Arthur R. Reynolds, Commissioner. Chicago, 1904.

Annual Report of the Health Department of the City of Louisville, Ky., for the Fiscal Year Ending August 31, 1904. Globe Printing Company, 1904.

The Fifth District Medical Bulletin, a Quarterly Published by the Fifth District Medical Society of San Antonio, Texas. Vol. I., No. 1, August, 1904.

New Methods of Treatment. By Dr. Lamontier. Translated and Edited from the Second Revised and Enlarged French Edition. By H. W. Syers, M.A., M.D. Contab. Physician to Out Patients Great Northern Central Hospital. Price, \$2.50, net. Chicago: W. T. Keener & Co., 1904.

Diseases of the Stomach and Intestines, with an Account of Their Relations to Other Diseases and the Most Recent Methods Applicable to the Diagnosis and Treatment of Them. By Boardman Reed, M.D., Philadelphia, in a Series of Eighty-two Lectures, Complete in One Volume. 1,024 Pages. Illustrated. Half mo., \$6.00; cloth, \$5.00. New York: E. B. Treat & Co., 241 West Twenty-third street.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. VIII. Materia Medica and Therapeutics, Preventive Medicine, Climatology, Suggestive Therapeutics and Forensic Medicine. Edited by Geo. F. Butler, Ph.G., M.D.; Henry B. Favill, A.B., M.D.; Norman Bridge, A.M., M.D.; Daniel R. Brower, M.D.; Harold N. Moyer, M.D. Chicago: The Year Book Publishers. July, 1904.

The Practical Medicine Series. Edited by Gustavius P. Head, M.D. Vol. IX. Physiology, Pathology, Bacteriology, Anatomy and Dictionary. Edited by W. A. Evans, M.S., M.D.; Adolph Gehrman, M.D., and William Healy, A.B., M.D. Chicago: The Year Book Publishers. August, 1904.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. X. Skin and Venereal Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M.D., and Hugh T. Patrick, M.D. Chicago: The Year Book Publishers. September, 1904.

Society Proceedings.**LOUISVILLE MEDICAL AND SURGICAL SOCIETY.****PRESENTATION AND REPORT OF CLINICAL CASES.**

Dr. Witherspoon : I brought a case here to-night that is of interest not because of its rarity, but because it is so common. I want to show the results of a new treatment for hay fever. It is a class of cases that I do not treat much. The patient is an old family servant who for the past eighteen or twenty years has suffered from hay fever, the attack coming on in August and lasting until the middle of October. I told her to come to Louisville, and I would try the pollantin treatment.

When she first came her eyes were reddened and swollen, and the nostrils were closed. For the first three days I used a solution of adrenaline, one to three thousand. Since then I have used nothing but the pollantin. I have never used this treatment before, and would like to hear from some of you who have used it. The pollantin is used by inhalation. There is a little measure with each bottle which will hold probably a grain, and she used it by snuffing it up the nose and by the direct application to the mucous membrane of the conjunctiva with a camel's hair brush.

Dr. Pfingst : I think this case is of interest to us all on account of the results of this new remedy. It seems that there has been some good results in this case. As to this patient I do not think that we can see anything, as we have no way of examining her. It seems that these cases are not so common as is generally believed. I have seen only two or three each year. This year I have seen only one. In the cases that I treated I got good results from adrenaline with good cleansing. It remains to be seen whether this remedy is efficient or not. I believe the irritant cause comes from different weeds, and if we happen to strike the right serum it will work, as in this case. We often strike the wrong remedy because it is produced by another pollen. I believe the doctor got a good deal of the effect from the adrenaline.

Dr. Guest : I do not know anything about the treatment that the doctor suggests, but just want to say a few words about hay fever in general. I believe it is purely a neurotic affection. I want to report a case showing the part psychology may play in the treatment of it. I have a brother-in-law who suffers every summer with hay fever. He

has a relative who believes in Christian Science. She told him she felt positive that she could direct him to a woman, a Christian Scientist, who could cure him. He at first objected because he hated to go to a woman physician. He arranged, however, to communicate with her daily by letter. When his hay fever broke out he suffered with it all that day and night, and the next morning wrote her a note telling her to put him on treatment immediately. When he returned that night he felt improved and slept better. He wrote his second note next morning, and was much encouraged. The third day he repeated his letter writing, and stated the symptoms had almost ceased. The running from the nose had practically ceased, the discharges from the eyes had ceased, and he was guying me about being cured by a Christian Scientist when regular physicians could do nothing for it. The night of the third day, when he came home to supper, he found a note from the Christian Scientist stating that she had been in the country, and would put him under treatment the next day. Realizing all his treatment had been only in his imagination the symptoms reappeared with the same intensity as before. The day following he made arrangements to leave the city for the summer.

Over four years ago, while in the mountains of West Virginia, I contracted what the specialists said was hay fever. They treated me for three or four weeks for it, but I would never give up that it was really hay fever, because I did not want it to be. All the next summer I suggested to myself that I would not have it, and the past three summers I have escaped also by keeping up this hypnotic suggestion.

Dr. Speidel: I would like to mention that I treated two cases last year with adrenaline, and kept the patients fairly comfortable. I would like to ask the doctor whether the remedy is prepared from the pollen of golden rod?

Dr. Witherspoon: I do not think so. It is a preparation made by some company in Germany.

Dr. Speidel: The pollen of the golden rod is supposed to be the most frequent cause of hay fever.

Dr. Morris: Having had no experience with this remedy, I know nothing about its virtues—according to Bosworth. Three factors are necessary to produce hay fever: some abnormality of the nasal chamber, a neurotic temperament and some atmospheric irritant. When one of these is absent hay fever can not occur in an individual, but the three being present hay fever will occur. Has this patient ever been

treated before, and had she been decidedly impressed by you that you were going to cure her with this new remedy.

Dr. Witherspoon: She has been treated for the past twenty years by every physician in Lawrenceburg, in Anderson county, according to her statements.

Dr. Morris: As Dr. Guest has said and Dr. Pfingst, it appears that there are cases where, if you can exercise the influence of mind over matter, they can be cured in that way.

Dr. Witherspoon: I appreciate the discussion in this case, and the reason I brought her here is that I wanted to show you her condition at the present time. This is a case of hay fever that has existed for eighteen or twenty years.

Another point that I want to make is that I know nothing of this new remedy. It was recommended to me by Dr. Hall.

This case has been under the most unfavorable circumstances. I instructed her to keep her room closed at night, but she has been so placed with a sick mother who has been suffering from asthma that she has had to sleep with the windows open every night.

I know nothing of these cases, and I only treated her because she was an old family servant. I am satisfied with the treatment, and I think she is. One case can not be taken as a criterion.

Dr. Adolph O. Pfingst: I have brought a specimen that I think will be of some interest. It is a macroscopic specimen, one of an epi-bulbar growth, that was removed from a man eighty-two years old. The specimen is a recent one, and I have not had time to make a microscopical examination. I judge from the pigmentation, however, that it is a melanotic sarcoma. Its close proximity to the ciliary region would also indicate that the pigment came from the ciliary region of the eye.

It is of interest because of the age of the individual and the question as to whether it should have been removed or not. If we had known at the time that this was an epi-bulbar growth, there would have been no question as to the advisability of enucleation, but from the general appearance and the impossibility to determine the point of origin, there was a question as to the advisability of surgical procedure.

When he presented himself he was apparently hearty, although his vessels were atheromatous. The growth was wedging the lids apart. He was disgusting to his family, and it was at their suggestion that I removed the growth. The mucus was continually discharging over

his face, so that the family gladly assumed the responsibility of an operation.

It will be of interest if Dr. Falconer will tell us of the difficulties he experienced in administering the anesthetic. For the first twenty-four hours after the operation we had to keep the patient alive with saline injections. He finally made a good recovery.

I brought the specimen also to show you the method of mounting, as the method will serve for other specimens, appendices, etc. The method was introduced by Professor Green, of Berlin. It has some advantages over the Priestly Smith method of preserving in gelatin. The gelatin specimens make pretty mountings, but you can not use them for subsequent microscopic sections. This method does away with that difficulty, but the specimen is not as easily transported, the fluid leaking under the lid.

The eye is frozen, and in the frozen condition cut in half with a very sharp knife. The halves are pasted to the surface of the glass jar with gelatin, the jar filled with formaldehyde solution, and the jar sealed by gluing the lid on with gelatin. I believe by this method we can mount better specimens. You will notice that this is cut out very smoothly.

Gentlemen, I would like to hear the opinion of the Society as to whether we should operate in cancer of this size in patients as old as our man.

Dr. Wathen : Is the percentage of sarcoma of the eye more frequent than elsewhere?

Dr. Pfingst : I think not.

Dr. Dunn : The question often comes up as to whether an operation should be done to remove a malignant growth of the eye. I had a case referred to me by Dr. Coomes in which the lower lid was first affected, the growth extending around the outer canthus and involving the upper lid. The man was forty-five years of age, and the disease was rapidly making progress. Dr. Coomes had treated him with the X-ray, and had gotten no reaction. The patient was acquainted with me and some of my results in epitheliomatous growths, and through Dr. Coomes came to me for treatment. I gave him treatment with a soft tube over the eyelid, and soon had reaction develop. This in time disappeared, and with it disappeared the epithelioma. No section was made of this growth, and the question came up whether it was sarcoma or epithelioma.

After its disappearance on the eyelid there appeared an ulcer back

on the upper surface of the eyeball itself near the insertion of the muscle; there was a great deal of tenderness at that point. After being off treatment for three weeks he came back with this condition. I at once began treating the growth at that point with X-ray, and it seemed to have no effect at all on him. I then sent the patient back to Dr. Coomes for enucleation, as I believed it necessary to remove the eyeball and as much of the optic nerve as possible. It again recurred back in the socket, and again it underwent an operation in which the socket was curetted. The third time it was necessary to use the cautery in the deepest part of the socket. The patient drifted out of my hands, and the last time I saw him there was an ulcer in the posterior part of the socket. He refused to undergo the anesthetic for a fourth operation, and has probably given up treatment.

The question comes up in my mind whether or not this operation should not have been done earlier. Had it been done when the disease was confined to the lid, rather when it attacked the ball, it might not have recurred.

An unusual case comes to my mind, and I would like to ask the members of the Society what is the largest dose of iodide of potassium that they have known a patient to take? I have a case of optic atrophy that gives absolutely no syphilitic history, still he has taken a thousand and seventy-eight drops of the saturated solution of potassium iodide. Is that not an unusual quantity? There are no evidences of iodism at all. I wrote for a saturated solution, so that in ten drops he only gets 5.3 grains of the iodide of potash. In the thousand and seventy-six drops he has taken to-day he has taken 570 grains. It has had no ill effect on the stomach. I would like to ask whether a person could take this much iodide of potassium if he had never had syphilis?

Dr. Morris: I have nothing to say in addition to what Dr. Dunn has said. I have seen the case several times. I saw him first about three months ago, and while I have nothing but a mental picture to draw from, I feel sure that at this last examination the discs were less gray or porcelain like and the vessels not quite so attenuated. Besides, he recognized a small black tie I had on and a small desk clock held in my hand before him, which he did not do at the first time I saw him.

Dr. Pfingst: I would like to say a word about cut rate drug stores. I believe the question who filled the patient's prescription is a pertinent one. If the man is taking that large a dose with little effect I think it would be wise to send the prescription to another druggist, and see

whether he can stand the same dose. A great many druggists consider price rather than quality.

Dr. Speidel: I would like to say that I consider it a mistake to prescribe a saturated solution of potassium iodide, because it is an indefinite way to prescribe. A drop of a saturated solution does not represent a grain. If four hundred and eighty grains are dissolved in the smallest quantity of water the resulting solution will measure nine fluid drachms. A more accurate way is to dissolve in a larger quantity of water; dissolve in sufficient water to make three ounces, then every teaspoonful represents twenty grains, and you can instruct the patient to have a measure glass or a one-ounce graduate, and you can direct him to take four drachms, half an ounce, or two ounces, or any quantity you choose, and then know how much he takes.

I can not answer the question as to how much can be taken in syphilitic cases, but I recently read an article in the *Medical Record* in which the writer stated that if an ounce of the iodide of potash daily did not relieve the condition it could not be effected. Another point is that the amount of iodine is not injurious, and if anything is injurious it is the potassium. If the sodium salt is used a larger quantity can be given. The potassium is poisonous to the economy.

Dr. Prather: I want to say a word or two as to where the prescription is filled. I have had twelve years experience in the drug business myself, and I know how they fill prescriptions. As Dr. Pfingst says I would have the prescription filled at some drug store that is not a cut rate store, and probably he would not be able to take so much of it.

Dr. Gossett: I have a patient on the iodide of potash, and she can take but six grains of the saturated solution, and I have to drop back to four or five.

Dr. Moren: I have seen the iodide of potassium used in hundred grain doses, and I have never seen any results from it in lesions of the nervous system, and I have never seen the least benefit result from these large doses. I have one patient that I gave three hundred grains a day, but had to stop it. I remember in one case of syphilitic deposit I could not go above eighty grains before he became saturated. Dr. Collins of New York, advocates large doses in locomotor ataxia. I have tried it in a few cases, but can not say that I got any effect from it.

Dr. Farmer: In Wyeth's "Text Book of Surgery" the author states that he has given nine hundred and sixty grains daily with favorable results.

Dr. Dunn: I have nothing to say except that this patient has lived in New Albany part of the time, and this prescription was filled there, but he showed no more effect from the dose than he does now. This patient is also taking the radium treatment for the optic atrophy. I notice in the journals that they are having some success with it. I have been giving him three minute exposures.

Dr. W. A. Jenkins: Just one word from the standpoint of the general practitioner as to removing any part of the body for malignant growths. Whatever our views may be as to the etiology of this condition, whether the remains of embryonic tissue or whether produced by micro-organisms, I take it there are a number of indications in favor of removal when possible. These growths should be removed for the relief of pain and to get rid of offensive discharges. The trouble is also very readily transmitted by the blood vessels to other parts of the body. When there is any possibility of relieving the patient the growth should be removed. Oftentimes the discharges are ameliorated for a considerable length of time and the possibility of recurrence in other parts of the body is stayed at least.

Dr. Pfingst (in closing): I only wish to add something that I omitted at the time I presented the specimen. It would seem strange that a growth of this kind would be allowed to retain this size before being removed, but this old man was an ignorant German, and did not care much about his condition. This growth presented at the corneal margin, and could have been removed early without trouble had the opportunity presented itself.

Dr. Victor N. Meddis presented paper, "Gonorrhea of the Prostate," under original articles, page 609.

DISCUSSION OF PAPER.

Dr. Hendon: This is certainly a very interesting subject, and one in which we are all interested. There is not one of us who has been in practice for some little time but remembers how he hates to see those fellows come in. We can not tell them to go away because we need the money. It is the same old story.

The mental depression in these cases is an important point with which we have to deal. It is peculiar that a man can run around with a discharge from most any part of the body, but a few drops from the urethra sets him all wrong.

As to the way they get this posterior infection. Lederman ascribes the majority of the infections of the prostate to an indulgence in the

sexual act or to nocturnal pollutions. He says that there is a sort of back suction very much like a rubber syringe that takes place just before the fatigium and that draws back the infection. In every case of prostatic infection the patient will give a history of nocturnal emissions or indulgence in the sexual act. Then all authorities agree that this posterior infection occurs by the material being driven back by injections or the use of instruments and that sort of thing. One author, I do not remember who it is—I think I saw it in the *Annals of Surgery*—says that the route of infection is almost invariably through the epididymus, and that in almost every case we have a history of epididymitis. I do not think clinical experience will bear out that statement.

Now, in the treatment of this sort of condition the best thing that I have ever seen is the instillation of the nitrate of silver solution, and it is an important point to always put in enough. Never be satisfied with the instillation of a few drops. Never use less than a drachm of the silver nitrate solution. Always use a syringe with multiple openings, never one with just an opening in the end. It does not suffice. Recently I had a patient in which I used thirty-two silver nitrate instillations, and cured an infection of the prostate that he had had for five years. I believe we are too afraid of the nitrate of silver. In this case I used a solution as strong as twenty grains to the ounce. Right after the use of the instillations instruct them to urinate, the chlorides of the urine neutralizing the excess of chlorides.

Dr. Wathen: I listened with much interest to the doctor's paper. It is certainly one of the most important complications of gonorrhea, and is especially instructive now for the reason that our views in regard to enlarged prostates are undergoing great changes since most of the Germans of prominence in that field of work have made more careful investigations in regard to the pathology of this organ. It is now conceded that all enlarged prostates have as their origin some inflammatory involvement of the gland. Formerly, we considered it a natural growth of old age, fibrous changes taking place in this particular gland, possibly in regard to its relation to the bladder. Most authorities accept the theory that it is an inflammation, and that it follows gonorrheal infection. I am hardly ready yet to accept this theory. Of course a clinical experience in a city of this size is limited compared with some of the German cities.

I have two cases, both of whom give no history of gonorrheal infection. One is a prominent citizen of this city, aged sixty-five, and

in active work, but he occasionally has these attacks, and has to resort to the catheter. I have insisted on operation, but he has refused. I have another case that I am going to operate on. He has had a great deal of treatment for his trouble, and when he came to the hospital I found him in a failing condition, a great amount of residual urine filled with pus, and had to be catheterized every twenty minutes. There is no history of gonorrhea in this enlarged prostate, although it is one of the largest I have ever seen. If we are to accept this theory here are two typical cases in which there is no gonorrheal history at all. In my limited experience of ten or twelve cases I have reached the conclusion that there must be some mistake as regards the inflammatory theory.

Dr. Meddis called attention to abscess of the prostate. He says apply heat. How would he apply heat to reach this particular part with any degree of satisfaction? I would like for him to explain where the application of heat is indicated in acute inflammatory conditions of this sort. We wish rather to abort this condition. Would it not be better to apply cold, and could not cold be better applied than heat?

Dr. Meddis: In answering Dr. Wathen's question as to how to apply heat to the prostate, the only way is through the rectum. Frank, of Berlin, has an instrument that he has devised for this purpose. Of course cold can be applied with the same instrument. The instrument is inserted into the rectum, and hot water applied in that way.

I can not accept the theory that the prostate is affected through the epididymus. In two hundred and forty cases in which the prostate was involved only twenty-seven had had an epididymitis.

Dr. Meddis: How often did you use massage, and how long did you carry it on?

Dr. Coleman: For three weeks. In one case, in a man of thirty-five, I got some result, not much. In this case I used the massage once every day for a week, and then every four or five days.

Dr. Meddis: Three weeks is a short time in which to expect a cure. I think you will have to carry your treatment further than three weeks. Massage the prostate every other day, and follow that by washing out the anterior and posterior urethra with the silver salts.

I have a case—or rather he is well now—who had gonorrhea six years ago. He was treated in New Orleans. He came here and married four years ago. He says that he never stayed with another woman since he married. Some time ago, in getting out of a buggy,

he was thrown astride the wheel, striking the perineum. In about three or four days after that he noticed a discharge from the meatus. He came in to see me, and I washed out the anterior and posterior urethra, and massaged the prostate and examined the discharge, and found the gonococci present, thus proving that they may lie latent in the urethra for an indefinite time. I treated the man from May until the middle of July before I effected a cure in this case. After making three examinations and failing to find the gonococci, I discharged him as well. Since that time he has had no further trouble.

Dr. Wathen: I have a case that I would like to report in this connection. Three weeks ago I operated on a German lady, aged twenty-two, who gives the following history: About a year and a half ago she married. She comes of a nervous, neurotic family. She weighed a hundred and thirty or forty pounds. Soon after marriage she began to lose weight, and the husband was unable to continue sexual intercourse. The vagina was large enough. The uterus was turned back and the cervix forward. When the labia were separated the cervix could always be seen. She was tender over the abdomen, no history of any trouble, but when her husband introduced his organ she would faint and remain that way for quite awhile. I hardly believed this, and started to make an examination, and when I introduced my finger she also fainted. A little over three weeks ago I took her to an infirmary, and as her family and husband insisted on an operation, I removed the uterus and tubes to make her life bearable. I found the ovaries enlarged about three or four times as large as they should be and a large uterus.

She has now left the infirmary, and when the finger is introduced she does not faint. We do not operate as a rule in these conditions, but here was a woman who weighed one hundred and forty pounds and had gone down to ninety-five, and unable to endure intercourse. Radical measures were called for.

Dr. Hibbitt: I do not see any indication whatever for doing a complete hysterectomy. I think the condition could have been relieved by less radical measures.

Dr. Wathen: What treatment would you suggest?

Dr. Hibbitt: Probably removal of the ovaries, with curettment and suspension of the uterus would be indicated in this case. I would have left the uterus.

Dr. Speidel: Could not this condition have been relieved by shortening the round ligaments and the use of local anesthetics, using

a glass bulb, the vagina becoming accustomed to this foreign body?

Dr. McKinney: I understand from reading recent works and from conversations with two or three surgeons that it is always wise to leave as much of the ovary as possible. Particularly as this patient was a neurotic patient, I should think that her condition would necessarily be even worse than before having removed them.

Dr. Hibbitt: I should like to ask one question. Has any one ever seen any permanent results from Alexander's operation of shortening the round ligaments?

Dr. Speidel: I can not say that I have observed any results. Statistics can be found in the last *Journal of Obstetrics*.

Dr. Wathen (closing): I have little to add except this, that my clinical experience is that no Indian is like a dead Indian. When we take the uterus and ovaries out we leave nothing to give trouble. This idea of conservatism in gynecology has gone too far. When you have a diseased ovary take it all out, take it away, and as in this case, with the uterus sticking out of the vulva, it should be removed, not only the uterus, but tubes and all. I formerly saved all of them, but these cases come back, and they are not cured. Take them out, and results will be much better.

As regards suspension of the uterus by any means, I have no faith in it. At the City Hospital this year I performed several operations before the class, doing ventricular fixation by Kelly's method, and I must say the results were fair only. If the tubes and ovaries are removed, take out the uterus. What good can it do? It may possibly do harm in the future.

As regards Alexander's operation, the statistics in many cases depends on who makes them out. You hardly hear of the operation in this country. In Germany to-day, if you will read the reports of the last German Surgical Congress, they have not only revived the operation, but make an incision, opening the abdominal cavity and introducing the hand and separating the adhesions.

Dr. Speidel: I prefer Ferguson's operation. The Alexander operation shortens the ligaments at the weak end from the uterus.

Notices

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ending October 5, 1904 :

- BANKS, C. E., Surgeon—Granted extension of leave of absence for twelve days from September 27th. October 1, 1904.
- RICHARDSON, T. F., Passed Assistant Surgeon—To proceed to Eagle Pass, Texas, for special temporary duty. October 4, 1904.
- TROTTER, F. E., Passed Assistant Surgeon.—Relieved from duty at Plague Laboratory, San Francisco, Cal., and temporarily assigned to exclusive duty in connection with the examination of aliens at San Francisco. September 29, 1904.
- LORD, C. E. D., Assistant Surgeon—Relieved from duty in connection with the exclusive examination of aliens at San Francisco, Cal., and directed to proceed to Ellis Island, New York, N. Y., and report to Surgeon G. W. Stoner for temporary duty. September 29, 1904.
- BOGGESE, J. S., Assistant Surgeon—Granted leave of absence for fifteen days from October 19th. October 4, 1904.
- RUCKER, W. C., Assistant Surgeon—Bureau letter of September 12th, granting Assistant Surgeon Rucker fourteen days' leave of absence from September 15th, amended so that said leave shall be effective September 16th; and Bureau telegram of September 26th, granting Assistant Surgeon Rucker three days' extension of leave of absence, revoked. October 3, 1904.
- COLLINS, G. L., Assistant Surgeon—Granted leave of absence for three days from September 30, 1904, under Paragraph 191 of the regulations.
- TUTTLE, JAY, Acting Assistant Surgeon—Granted leave of absence for four days from September 19th. October 4, 1904.
- WINN, C. K., Acting Assistant Surgeon—Granted leave of absence for fourteen days from September 25th. October 3, 1904.
- MCDONALD, JEANETTE, Medical Inspectress—Granted leave of absence for three days from September 25, 1904, under Paragraph 210 of the regulations.
- LAGRANGE, J. V., Pharmacist—Granted leave of absence for seven days from September 26, 1904, under Paragraph 210 of the regulations.

Official :

A. H. GLENNAN,

Acting Surgeon General.

THE OSTEOPATH'S BOAST.

BY DOUGLAS GRAHAM, M.D.

When God made man he gave him bone
For the Osteopath to work upon ;
He gave him nerve and He gave him muscle
That he might surely stand the tussle
Of getting well.

REFRAIN.—No more pain shall you endure,
For there is nothing I can't cure,
For I am an Osteopath !
Oh, I am an Osteopath !

Mankind has many ills
For which the doctor's pills
Do naught but make him worse,
And decrease the family purse,
And all to no purpose.

REF.—But no more pain shall you endure, etc.

The spinal column is the place
That raises hell with the human race ;
For the nerves get caught in the bones that slip,
And will not let go their bull-dog grip
Until we put them back again.

REF.—But no more pain shall you endure, etc.

It matters not from what you suffer,
Neuralgia, gout or something tougher ;
Measles, diphtheria, or whooping-cough,
We can cure them all just right straight off
By setting the bones.

REF.—No more pain shall you endure, etc.

No masseurs nor masseuses we,
For they do naught but rub and patter,
While we take the pressure off the nerves,
And thus get at the root of the matter,
And cure the patient.

REF.—But no more pain shall you endure, etc.

The doctors do not love us well,
Especially this past winter.
When their coffers are so empty
And ours are filled with plenty

By the grateful (great-fool) patients.

REFRAIN.—But no more pain shall you endure,
For there is nothing I can't cure,
For I am an Osteopath !
Oh, I am an Osteopath !

APRIL 15, 1904.

THE OSTEOPATH'S LAMENT.

BY DOUGLASS GRAHAM, M.D.

O Lord! forgive us for our sin,
For surely we've been taken in
By that Great Mogul of the woolly West,
Whose name befits him when at rest.
Of English he knows very little,
Of French and German not a whittle;
Of Latin and Greek he never heard,
Or he would ne'er have cribbed the word

That has befooled us all:
Osteopathy—disease of bone—
For misuse of this we can't atone.
It may be used for disease,
But ne'er for any treatment, please.

Alas! alas! it is not true
That what we thought our art is new;
It has been known from ages past,
From Adam down to the very last.
Hippocrates knew of its virtues sure,
And with it did work many a cure;
Anatrisps called it he,
Which just puts us right up a tree.
It is an oak where acorns grow,
And they press hard upon our toe,
For our feet are soft and tender yet,
And our shoes are not a very good fit.

Galen of this art did write well,
And Celsus much did also tell;
Oribasius much had to say,
And so did old Ambroise Pare.
Great Caesar was in this way cured
Of what by others was endured,
And still is at the present day
A bad sort of "neuralajay."

In later times there's many a man
Who has won distinction with his clan
By advocating some new name
For something old to spread his fame,
But this small grace is not for us,
And that is why we make a fuss.

In good old Scotland's Isle

There lived the Duke of Argyle,
A man of very great merit,
Who, without claiming at all any credit,
Put up posts on his vast estate
So that his tenants need not wait
For an Osteopathic O. D.
To scratch their backs just a wee.
They suffered so much from the itch
It made them as crazy's a witch,
And as they rubbed their own backs, with a
smile
Exclaimed, "God bless the Duke of Argyle!"

There's Henrik Ling, who had the knack
Of twisting the bones and putting them back;
The "Movement Cure" he called his art,
And this is not so far apart
From what we practice now-a-days,
And thus get such uncalled for praise.
Mortimer Granville, of London, too,
Who makes us feel so very blue,
He did find out the art so fine
Of vibrating nerves along the spine,
Which we did think was all our own,
And thus the seed for strife is sown.

Old Doc. Munroe, of Boston town,
The nerve adjuster of renown,
We have but learned of his skill,
Which makes us feel just almost ill;
If he were but alive to-day
We would not have a word to say;
We'd hang our heads for very shame,
For surely we are much to blame.
If we had only had horse sense,
We'd been more on our own defence,
And looked this matter up before,
And that is what we now deplore.
In French and German much we'd find,
In English, too, unless we are blind;
It is massage when rightly done,
And that just ruins all our fun.
But this—but this we can not do,
And that is why it is not true.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

VOL. XXXVIII. LOUISVILLE, KY., NOVEMBER 1, 1904. NO. 159.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

REPORT OF EYE CASES.*

BY DR. WM. CHEATHAM.

Mrs. M. C. L., age forty-four. Has had epithelioma of external cathus of right eye for ten years. Has had it curetted and X-rayed six times. The growth has extended into the inferior cul-de-sac, and is burrowing into the socket beneath the globe. I curetted it and used the galvano cautery two or three times. It would cicatrize nicely for several weeks, then reappear deeper in the orbit. Dr. Bloom, who was her physician, curetted it once, and I afterwards applied the electric cautery with no better result. A complication in the case was a good eye. Up to some few days ago we endeavored to save the globe, but found we could not, so it was enucleated. We of course disliked sacrificing a good eye, yet it had to be done. Hemorrhage was quickly stopped with adrenalin. Dr. Bloom then with his thermo-cautery curetted and cauterized thoroughly all suspicious places. We have some hopes now of a recovery. From previous efforts cicatricial lesions had tied the lower part of the globe down pretty tight, so that every movement of the eye gave some discomfort and kept up much irritation.

A few days ago a young man, twenty-one years of age, the day before he was to start to Yale, was opening a box, using two hatchets. A piece of steel flew from one of the hatchets, striking the left eyeball just within the sclero-corneal margin, passing through the iris, suspensory ligament, and, I suppose, passed through the vitreous, and may have gone through the globe. Central vision was immediately lost. This central scotoma gradually extended until perception of light only

* Read before the Louisville Clinical Society October, 1904.

was left. The accident occurred at 9 o'clock that morning, and I saw him that night at about eight. There was a clean cut hole at the sclero-corneal junction and through the iris. The next afternoon I thought there were some lens striations, but Drs. Dabney and Ray, who were called in consultation, were not sure of it. I used dionin to prevent sepsis, used atropia, sulphate, douches of boric acid, saturated solution, and put him to bed, gave calomel, and had iced compresses applied constantly all night. The next afternoon he could count fingers peripherally. He had no pain and no chemosis. Drs. Dabney and Ray were called in that afternoon to discuss the use of the magnet. We all decided it should be tried, and I believe the boy was taken to Cincinnati. I learned later the patient was taken to Cincinnati, and the doctor there tried the magnet, but it was a failure; the eye was enucleated. I believe a better result would have been gotten in this case had the magnet not have been used. Much trauma must have resulted from the use of the magnet. I don't believe I would have enucleated. The primary wound, and, as afterwards shown, the piece of steel were not in the so-called dangerous zone, and so with rest and proper treatment, a good looking globe might have resulted with little or no danger of sympathetic ophthalmia.

Dr. Fisher has removed pieces of steel from one hundred eyes with the magnet, with 86 per cent. of success. Others show as good results.

Saturday night last I received a call to go to the Avenue Theater to see a man who had hurt his eye. I found a wound of the conjunctiva, quite a tear. He said that he had wiped his face on a towel with a nail in it. I cleaned the wound, gave him a boric acid wash, and iced cloths to use when not on the stage. He was the leading man, so it was important to let him work. I saw him no more, as his company left for Cincinnati next morning. I apprehend no trouble.

Ten or fifteen minutes later, while at the Pendennis Club, a physician from Orleans, Ind., brought a young man there to see me. While breaking a piece of glass tube something struck him in the right eye. He does not know whether it was a piece of the glass or the glass cutter. The body, whatever it was, struck the right side of the nose, then the eye, making an incision extending from over the ciliary body on the nasal side clean across the cornea, wounding the lens and iris, with prolapse of the iris. V = perception of light. There was not much pain. I directed him to go to the infirmary, and use iced cloths, atropia, and to have the eye well cleaned with a saturated solution of acid boracic every two hours. He also had a calomel

purge. I also used dionin in the eye. He has had little or no pain; there is but slight reaction, and he counts fingers readily at ten feet. As the lens becomes more opaque his vision will become less. If the lens swells much an incision will have to be made or the old wound opened and the lens matter evacuated. There is some danger of sympathetic trouble in this eye, as the wound extends into what is known as the dangerous zone. The patient is willing to have the eye removed should I advise it. When to do this is of great importance.

LATER.—Dr. Ray saw this case with me, and we agreed that the eye should be removed. That afternoon the operation was performed, with nothing unusual occurring. For several days afterwards there was a daily hemorrhage into the orbit, which caused some pain; under the compress it was checked. On laying this eye open most of the retinal vessels were empty, and in their place large white streaks. There was no foreign body in the eye.

Saturday last I received a message from Norton Infirmary that there was a patient there from Mt. Sterling to see me. I directed that he be sent to my office. He reported at my office in a little while, and I found a man thirty-five years of age, general health good, who gave a history of having been shot in the mouth February 17th last. The bullet knocked out two teeth on the left side, passing up and to the right, coming out at the right temple. It had passed through the right nostril, and, I suppose, the right orbit. The right eye was blind but the ball looked natural, though not as prominent as the other. The ophthalmoscope showed almost total destruction of the choroid and atrophy of optic nerve and retina. The eye was sensitive to touch; the left eye was slightly hyperemic and sensitive to light. I advised removal of the right eye that day. He said he would rather wait until Monday. I consented, and ordered him a calomel purge. He came to see me Sunday morning. He telephoned to a relative Monday morning that he was feeling fine, not the least frightened. I asked Dr. Ireland to see him Sunday, and let me know if it was safe to give him an anesthetic. He examined him Sunday and again Monday, and found no trouble. About 1:45 Monday Dr. Ireland commenced to give him chloroform. I was not present in the room when they gave the anesthetic. I was in the operating room. He must have given it very slowly, as I got very impatient waiting; had been there for some time when Dr. Ireland sent for me. On reaching the room, he told me he feared the patient had succumbed to the chloroform. We rushed the patient into the operating room, and put

him on another table, on which we could lower his head. Dr. Ireland had given him strychnia, atropia and nitro-glycerine, and commenced artificial respiration. The patient was deeply cyanosed on head, neck and upper chest. The rest of the body looked quite natural. On slight pressure the skin would whiten, but immediately on removing the finger would blue up again. I listened several times, but could get no heart beat. Dr. Ireland said he felt slight radial pulse for some time. We kept up active, constant artificial respiration for one and one-half hours. The nails, arms and hands were of good color. I used the stethoscope, but could get no heart beat. I forgot to say that the tongue was held out and rhythmical action kept up for some time. As to the eye symptoms I looked upon the case as one of sympathetic irritation; he had had similar symptoms before. This is the first death I have had from an anesthetic. Dr. Ireland said the patient struggled violently, resisting the anesthetic all the time. It took two or three people to hold him on the table. There had been no examination of urine made.

Dr. Ireland said the patient died of paralysis of the respiratory center. He said that respiration stopped suddenly and never returned, and that the radial pulse kept up for some time. The discoloration of the skin never extended beyond the head, neck and upper chest. I think Dr. Ireland told me that this is the first death he had had in over 3,500 cases.

October 13, 1903, Dennis McCarty, foreman, age seventy, came to see me about his left eye, with the following history: While washing his face he brushed some epithelium from his left cornea. V. L=O. Glaucoma, chronic. I gave him esirin sulphate to use locally. October 11, 1904, he came to see me again. Pupil widely dilated. T. and Z. Cornea opaque, blood in anterior chamber, eye very painful. I gave him a calomel purge, some quinine, hot water bath and eserin. His pain was relieved for about a week, when he came to see me in great pain. I advised enucleation, which I forgot to say I had advised before, but he begged off. That afternoon the eye was enucleated. Dr. Ireland gave chloroform in this case and the young man from Indiana. There were no bad symptoms followed. A suggestion might have been made and acted on in this case: that is, an iridectomy in fellow eye while the patient was under chloroform. Glaucoma is so commonly in both eyes that one might expect it to follow in the right and might it not have been well to have anticipated it, and performed iridectomy in that eye while the patient was under the anesthetic? An iridectomy in one eye for glaucoma has been known to have been rapidly followed by acute glaucoma in the other eye, which before was removed. When I made a section of Mr. McCarty's eye there many retinal hemorrhages.

**ACUTE GANGRENOUS CHOLECYSTITIS, WITH REPORT
OF CASES.***

BY F. W. SAMUEL, A.M., M.D.

Professor of Surgery and Clinical Surgery, Kentucky School of Medicine.

Inflammation of the gall bladder involving the outer organ is not at least a very common occurrence, and must be considered apart from so-called catarrhal conditions of the mucous membrane of the gall bladder and ducts, which is the constant complication of gall stones of long standing, and may be regarded as a constant factor in cholelithiasis. In fact, I agree, in the main with Fenger that when the classical attack of gall stone colic makes its advent it is the sign that a mild infection has taken place as a complication of the gall stone formation.

In studying the pathology of the gall bladder inflammation, our attention is at once drawn to the fact that anatomically the gall bladder and its ducts, as well as the liver, are located and so connected with the intestines that infection is readily invited. It is rather inexplicable to me that more serious cases of infection, with inflammation, do not occur in the gall bladder. Indeed, mild infection does occur commonly; the subject of gall stone formation is inseparably connected with infection, and this is the accepted theory of to-day.

Infection of the gall bladder occurs primarily in the passage of the bacteria through the ducts to the gall bladder and liver, which may be followed by jaundice or it may not, and is accompanied by an attack of angiocholitis. In biliary obstruction, due to calculi, in fact, the angiocholitis is the chief factor in the attack of cholecystitis. That infection is the cause of inflammation in the biliary passage is no longer in doubt, as it has been seen at the operative table, and the identical conditions have been reproduced experimentally in the laboratory, rewarded by the labors of Naunyn, who has shown the role of the colon bacilli in gall stone formation, and the experiments of Bignami, Park and Cushings of the pyogenic organisms, we at last have a definite causative factor in the production of this lesion.

The conditions present in the two cases presented to you in my paper I regard as representing the extreme limit of inflammation of the gall bladder, and are to be explained by the impaction of the cystic duct with a stone or stones, with rapid infection of the gall bladder with the colon bacillus and streptococcus. Mechanical obstruction prevented the gall bladder emptying its normal secretions, which were

* Read before the Eagle Valley Medical Society, at Sanders, Ky., October 4, 1904.

constantly accumulating. Rapid infiltration of the walls of the gall bladder, rapid outpour of exudate, with infective thrombosis of the veins of the walls of the gall bladder leading to necrosis, and the extensive involvement of the peritoneum with the inflammatory process formed the great mass of organized lymph surrounding the gall bladder.

This interference with the circulation in the gall bladder and inflammatory changes made it impossible for the gall bladder to cope with the infection, and gangrene was the natural result. I take it that in infections of the gall bladder leading to inflammation gangrene is not so frequently the result as it is in appendicitis, because in the latter there is usually only one nutrient artery, while the gall bladder is more freely supplied. Therefore infective thrombosis is not nearly so serious in its character.

My attention was forcibly directed to this very serious condition—cholecystitis—by a report from Roswell Park, in the *Annals of Surgery* of 1893, in a paper on the “Importance of the *Bacillus Coli Communis* as a Pathogenic Agent,” with a report of a case of cholecystitis suppurative due to the colon bacillus and the streptococcus, and a report in 1898, by and with Lucius W. Hotchkiss’ review, with collection of twenty-one cases, calling attention to the importance of a differential diagnosis, and laying stress on the fact that often diagnoses between inflammation of the gall bladder, appendicitis, acute intestinal lesion and lesion of kidney (right) are sometimes extremely difficult to make. Likewise Fowler, in his last work on appendicitis, recognized the great importance of this subject, and has devoted several pages to differential diagnosis between appendicitis, inflammation of the gall bladder, etc.

Symptomatology—The symptoms present with cases of gall stones located in gall bladder, accompanied with a so-called catarrhal inflammation, are now well classified. In most cases there is always a history of digestive disturbances, an intermittent or remittent type of a very mild fever—our attention having been especially directed to the fever by Osler—and jaundice in these cases, even after two or three or more attacks of typical biliary colic, is likely to be absent. In fact, too much stress has been laid upon jaundice as a pathognomonic sign of gall stone. In inflammation of gall bladder, with or without stones, jaundice will only be conspicuous by its absence, and when present is evidence that a stone has either become impacted at the junction of cystic and common duct, and infection and the jaundice is the result of mechanical obstruction.

Again, we are well aware of the fact that gall stone in the bladder has been reported to have remained absolutely quiescent during the entire lifetime of an individual. If such cases do occur I regard it as a fortunate circumstance in that at least the case has escaped infection and the resulting angiocholitis, which condition is the forerunner of biliary colic, the result of gall stones.

The most prominent symptom of this class of cases is pain, attended with slight nausea, pain usually located in region of gall bladder, extending toward the epigastrium, to chest and through back; generally great tenderness in region of gall bladder and rigidity of rectus abdominis; there may be slight enlargement of the liver and some soreness in hepatic area, urine usually high colored, bile stained; **vomiting a prominent feature.**

Common Duct Stones—Colic is a very prominent feature; it is always of a severe nature and an intermittent character, icterus is present in all, and is a cardinal feature, being intermittent or remittent. Fever is present in all cases, and is of the intermittent or remittent type, the renal secretion is characteristic, and all during an attack of so-called stone colic the stools are clay colored.

The symptoms of acute cholecystitis are quite different; the onset of the condition is sudden, the pain is paroxysmal in character, nausea and vomiting are prominent features, the rectus abdominis is rigid, the facial expression is anxious, our patient is prostrated, temperature is elevated, 100° to 104°, a rapid pulse, furred tongue, constipation is always present, which was a feature in one of my two cases, due to the presence of a circumscribed peritonitis. Add to the local symptoms a gall bladder with the stone impacted in the cystic ducts, the downward descent of the gall bladder, enlarged by the collection of the fluid and its thickened wall, located in the site of the appendix, forming a tender tumor just beneath the rectus with its sudden onset, simulates a typical attack of appendicitis. A diagnosis would be hard to arrive at, if not a mere conjecture on our part. It is to these symptoms that Fowler has called our attention as presenting the difficulties that beset us in making at once a positive diagnosis.

Treatment—As to the treatment, cholecystitis, to my mind, clearly calls for surgical intervention to prevent the serious complications which would follow if unrelieved; it prevents the septic peritonitis extending from the inflammatory process of the gall bladder. In cases of such severe nature, where infective thrombosis is interfering with the circulation of the gall bladder and producing necrosis, ulceration

or gangrene, the danger from rupture is imminent. Therefore quick surgical intervention is called for.

In the report of these cases a full history was obtained from each case after recovery, and the fellows of the Society will bear it in mind in the discussion of differential diagnosis, as many points could not have been obtained from a patient so desperately ill when we are called to make a bedside diagnosis to decide on sound treatment, for every moment we consume to speculate is very important to our patient.

CASE I.—Mrs. Ficher, married, mother of one child, age twenty-four years, of healthy German parentage, a decided blonde in type. Her health until about two years ago had been exceptionally good, when she began to suffer attacks of what was called by a physician indigestion. Attacks of colic in the stomach and abdomen would make their appearance after ingestion of food. They were frequent at times, and then she would have long periods of rest from them. These attacks lasted from thirty minutes to two hours. When relieved she would continue her household duties as usual without any effects. These attacks date soon after the birth of her child. Just before this attack she had enjoyed very good health and a long interval from pain.

Her last illness began as a colic at night, which was so severe and lasting as to necessitate the calling in of a physician to give relief. The following symptoms were noted by him: Pain in right side, tenderness in region of appendix a little above the omphalo-spinal line, temperature 100° , pulse good and 100, tongue coated, bowels constipated, abdomen slightly distended, but not tympanitic. The next morning her physician saw her, symptoms aggravated. Temperature 100° , pulse 100, tumor more distended and lower, exceedingly tender; abdomen now quite tympanitic; purge ordered (salts); no results.

On the third day, in the morning, I saw the case with Dr. R. G. Fallis. Temperature 100° , pulse 120, abdomen tympanitic, facial expression exceedingly anxious, respiration quick, of thoracic type—23 per minute, skin moist, beads of perspiration on forehead, lips dry, tongue dry at tip, moist at middle and posterior part. On examination of abdomen a distinct tumor was found at site of appendix, quite tender, quite fixed. Skin over tumor slightly edematous; greatest point of tenderness now corresponds to McBurney's point; no jaundice.

Diagnosis—Appendicitis, either a periappendicitis or para-appendicitis. Dr. Fallis suggested that it might be an inflamed gall bladder, but to me it was a typical case of appendicitis.

Operation—An incision was made over the most prominent part of

the tumor. After the skin and the fat had been divided, it was noticed that infiltration had occurred in the muscular walls of the abdomen, which indicated that the tumor was adherent to the parietal peritoneum. After carefully dividing the muscles I worked my way to the lower part of the incision in order to open the cavity below the inherent mass. When the cavity was opened I was enabled, by introducing my finger, to easily separate the tumor from the anterior wall. I then extended my incision upward, and the entire mass presented itself in the wound as a globular tumor, entirely covered by partly organized lymph. On breaking up the adhesions slightly around the tumor it presented itself as a dark globule, perfectly smooth, with a patch of gangrene over an inch in diameter. I was now able to observe the appendix, which was absolutely normal. The intestines and omentum were adherent to the tumor, and were covered by partly organized lymph. After separating the adhesions freely I was enabled to follow up the tumor, which was in the direction of the gall bladder. It was evident now that I was dealing with a very large gall bladder, which was in a state of inflammation. The gangrenous portion was so soft that I easily pushed my finger into its cavity, having first taken the precaution to protect the cavity by large pads of gauze. The entire gangrenous area was trimmed with scissors, allowing about eight ounces of muco-purulent fluid to escape. Impacted in the cystic duct were a number of gall stones. The adhesions beneath the liver and at the base of the gall bladder were not even sutured to the parietal peritoneum, relying entirely on the packing of gauze around the fundus to check hemorrhage and to drain the field of operation when the upper and lower parts of the incision, especially the lower part, were closed with interrupted sutures, the gall bladder being so large from distension as to easily present itself in the upper third of the incision. Over this a large absorbent dressing was placed, which was removed at the end of twelve hours, thoroughly bile stained, at the end of which time her temperature had dropped from 104° to 101° .

On the third day the packing was removed, gall bladder irrigated, during which three gall stones were extruded. From this time on her recovery was uneventful.

I might add here as an interesting feature of the case that she was three months and a half pregnant. Gestation was uninterrupted. She was delivered at the allotted time of a healthy baby.

CASE II.—Case two is almost an exact reproduction of the case just

reported, and I shall only give as briefly as possible the cardinal features.

Mrs. Rausch, thirty-three years of age, quite robust in physique, brunette in type, mother of seven children, gave the following history: Has for ten years spells of colic attributed to indigestion, always located in epigastrium and in the region of the gall bladder; has never been jaundiced during or after an attack. Her attacks of colic have always come on suddenly, and, with the exception of the last one, have never lasted longer than thirty to sixty minutes, incapacitating her only a short time from her household duties.

I was called to see her in the last attack, five days after the beginning of the attack. The following conditions were noted: Bowels had moved freely on day before from a purge, pulse 130; she was extremely prostrated; anxious facial expression; evidently in great pain; temperature 102°. On examination the abdomen was tympanitic, tumor well defined in right iliac fossa in the axis of the omphalo-spinous line; the right rectus was quite rigid in the center, the greatest point of tenderness was in the center of the tumor, which was at the site of McBurney's point. Taking into consideration the above symptoms, with the sudden onset of trouble, with such slight gastric disturbance, the absence of jaundice, the very low location of the tumor, I made a diagnosis of appendicitis.

Operation was proposed and accepted. Patient was removed to the infirmary. An incision was made, as is usual in cases of appendicitis, the middle of which was about the summit of the tumor. Upon opening the cavity a smooth, globular tumor presented itself, of a dark mahogany color. At the same time the appendix was seen presenting perfectly normal. The incision was extended upward to the region of the gall bladder. Remembering my experience of a few weeks before, I recognized that I was dealing with a large and inflamed gall bladder. I pulled the gall bladder into the upper part of the incision and aspirated nearly ten ounces of fluid, muco-purulent in character.

The gall bladder was now incised, and some twelve or fifteen stones were removed.

The case was treated on the same principle as the former, except that the gall bladder was sutured to the parietal peritoneum. She made an easy recovery.

Progress of

Medical and Surgical Science.

An Unusual Distribution of Blood Vessels.—When the cutaneous incision is made in the median line between the umbilicus and pubes, we nearly always have to use hemostatic measures on four or five small arteries.

Just a few days ago, while doing a laparotomy, the surgeon made the primary incision through the skin and subcutaneous tissues down to the muscles, immediately was blood spurted from more than a dozen cut vessels, and when the last vessel was clamped there were just fifteen hemastots on the abdomen, each one controlling a vessel. There was no inflammatory condition in the region of the incision, nor was there a scar.

The operation was an exploratory one; an extra uterine pregnancy of about six weeks' duration existed. I do not think this condition had anything to do with the unusual amount of blood we had to deal with.

Acute Otitis in Children—A Study of Fifty-One Operative Cases in Private Practice. By Charles Gilmore Kerley, M.D. In the study of 51 cases he found that the disease occurred in both ears in 28 cases, and that a second attack took place in two cases, one after three months and the other after five months.

In 38 cases the trouble followed a cold of the ordinary type, measles caused it in 7 cases, scarlet fever in 2 cases, and German measles in 1 case. The infection was streptococci in pure culture in 13, staphylococci in 11, streptococci, staphylococci and pneumococci in 12. The other cases were mixed infections of different varieties. The physical condition of the child seemed to exert no influence on the susceptibility; two-thirds of the patients were strong, well nourished children; the tonsils played no part in any of the cases.

The fact that 72 per cent. occurred in children after bad colds, and in 77 per cent. of these cases pain was absent, makes it important that every case that runs for a number of days with fever, and no symptoms that could cause it can be found, and the case one of those called chronic la grippe should be thoroughly examined, and if this be true in those who have no pain, then certainly every case that presents itself

where the child pulls at the ear, or rests poorly, or who appears to be uncomfortable from any cause, should have a thorough examination of both ears made by a competent specialist.

In conclusion, he calls attention to the fact that the children only showed signs of feeling bad when the fever is up, and that when the fever was down they would play around, and that it was hard to make the parents see the absolute necessity of an immediate operation, for in every case an immediate paracentesis should be done.—*Abstract from Archives of Pediatrics*, October, 1904.

X-Ray Therapeutics in Surgical Tuberculosis. By J. B. Guthrie, New Orleans, La. In this he states that the inoculation tuberculosis is materially affected by the application of the rays; that in the experiment on eight guinea pigs inoculations were made in the groin, and all but three were allowed to go without exposure to the X-ray, and all died, but in those that were exposed none died, and the only symptoms were a localized form of the trouble, and that in lupus, where it is exposed to the rays, that the tubercles gradually disappeared and were replaced by connective tissue. It is also stated that one of the first things to be treated by the rays was a case of lupus vulgaris, and that now there are a number of cases on record that have been cured by the application of the rays, and that time enough has elapsed to know that the cure is a permanent one.

Old ulcers are made to heal, or at least to clean off rapidly, by the use of the ray, and that the use of the ray to the skin diseases, such as acne and other pyogenic skin troubles, shows that it is a marked stimulant to the embryonal connective tissue cells, and by so doing aids rapidly in the healing process.

In the treatment of tubercular glands about the neck, where it would be impossible for the surgeon to remove all the glands, or where the scars would be unsightly affair afterwards, in these cases the ray should be used, and the surgeon will be rewarded by the disappearance of the trouble; and also those cases that come with a number of sinuses in the neck, that would be impossible to heal by operative means, the ray does good, and should be tried.

Again, in those cases of spondylitis, where a mixed infection has occurred, and several operations have been done, possibly in an effort to give relief and failed, the X-ray may do good and rapid healing take place.—*New Orleans Medical and Surgical Journal*, September, 1904.

Adrenalin in Uncontrollable Hemorrhage.—Dr. Otto Lange, of

Baden-Baden, reports six cases of severe hemorrhage which were controlled by adrenalin. One was that of a hemophiliac who received a wound on the thumb, the bleeding from which resisted all treatment until an application of adrenalin and normal salt solution was made, whereupon it was immediately and permanently arrested. Two cases of hemorrhage caused by drainage tubes pressing against granulation tissue in operation wounds yielded readily to the influence of adrenalin tampons, although other styptic tampons had produced only a temporary arrest of bleeding. An obstinate case of epistaxis was also controlled by packing the nares with strips of gauze soaked in adrenalin. In two instances the drug was administered internally, once in hemoptysis and once in hematemesis accompanying carcinoma. The case of hemoptysis was of three days' duration, and had resisted morphine injections of ergotin and gelatin, but ceased after thirty drops of adrenalin had been given twice within about two hours. The case of hematemesis was controlled by a few doses of the drug.

Although not large, Lange believes that this series of cases attests the value of adrenalin in hemorrhage.—*Therapeutic Gazette*.

The Administration of Quinine in Pregnancy.—It will be remembered that some years ago the *Therapeutic Gazette* published several expressions of opinion from active obstetricians as to the value of quinine as an oxytocic, and concerning its safety when administered to patients who are pregnant. It will also be remembered that a good many practitioners believe that this drug, if administered in full dose, is capable of producing abortion, whereas others claim that where abortion follows its use the real cause is the malarial paroxysm from which the patient suffered. We therefore note with some interest a paper published in *La Clinica Obstetrica* for April, 1902, in which Maggi reports twenty cases in which quinine was administered freely to pregnant women without in any instance producing abortion. He believes that it should always be given when malarial fever affects such patients, and that the danger from the malarial infection is far greater than the danger from the quinine. Indeed, where quinine was given to pregnant women suffering from malarial fever, it was noted that the infants were unusually healthy and robust. In the same journal for June, Betti indorses this view of Maggi, and agrees that quinine should always be given to pregnant women suffering from malarial infection, since by its use both the fetus and the mother are protected, and their general health improved.—*Therapeutic Gazette*.

THE AMERICAN PRACTITIONER AND NEWS.

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Editorial.

Since the introduction of antitoxin, opinion has undergone a change with regard to local treatment of diphtheria. While it should not be entirely abandoned, still it is of secondary importance.

The purpose of local treatment, it is now agreed upon, should be cleanliness, and not the destruction of bacilli. Cleanliness of the nose, mouth and pharynx is important, inasmuch as one of the chief dangers of the disease is the aspiration of bacteria contained in the abundant secretions of these parts, into the larynx and bronchi. Our aim should be to keep the parts as clean as possible without too severely taxing the strength of the child.

While it is true that we have in lactic acid, tartaric acid, etc., agents that in a very short time, apparently at least, entirely destroy a very tenacious membrane, and no doubt to some extent inhibits the rapid multiplication of the hords of bacteria harbored under this

membrane, thereby diminishing the quantity of toxic matter taken up by the lymphatic system.

As external applications to the throat have practically no effect on the disease except to possibly lessen the amount of toxins absorbed, and frequently the membrane is so located as to make it impossible to apply local treatment, we should not rely on attempts to destroy the focus of absorption which is an uncertainty when we have in antitoxin a remedy which not only causes a membrane to rapidly disappear, but antagonizes and antidotes the toxins already absorbed, at the same time stimulating the alexines, and to a very great extent inhibits, if not entirely destroys, every bacilli that is subjected to it.

We have all seen very tough, tenacious membrane rapidly disappear from the tonsils after the use of antitoxin, and, too, without the risk of impairment to the mucous surface over which the membrane is located. We doubt that any chemical of sufficient strength to destroy millions of bacteria and dissolve dead organic matter (the membrane) in five minutes can do so without serious damage to the normal mucous membrane.

Book Reviews.

Diseases of the Intestines, a Text Book for Practitioners and Students of Medicine. By Max Einhorn, M.D., Professor of Medicine at the New York Post Graduate Medical School and Hospital, and Visiting Physician at the German Hospital, New York. Second Revised Edition. New York: Wm. Wood & Co., 1904.

That the first edition was exhausted, hence a demand for a second, speaks well enough for the work. The author says that as very little progress has been made in intestinal diseases in the past four years, little has been added to this edition. The reviewer, though, has reason to think from familiarity with the first edition, that little was needed in the second, and both now constitute good texts on intestinal diseases.

Since the other edition is exhausted and what new topic has been gathered in the last four years is incorporated in this volume, and as its price is very reasonable, we certainly recommend the same. This volume, with "Einhorn's Diseases of the Stomach," constitutes a good text on the digestive tract.

The Physiological Feeding of Infants, a Practical Handbook of Infant Feeding and Key to the Physiological Nursery Chart. By Erie Pritchard, M.A., M.D. (Oxon.), M.R.C.P. (Lond). Second Edition. Greatly Enlarged and Entirely Rewritten. Price, \$1.50, net. Chicago: W. T. Keener & Co., 1904.

Dr. Pritchard's book is one the result of his wide experience in infant feeding, and his adaptation of the American system of percentage feeding to the English nurseries. A successful man with a successful system is necessary for a working handbook of this kind. He attempts to show the impracticability of having one formula for all children, and advocates the study of adaptation of a food to a case on its own individual merits. Too technical terms are avoided that the nurse may find the work useful.

The book contains very many useful points. An introduction on the evolution of percentage feeding is followed by Chapter 1 on breast feeding. A general account of the method of percentage feeding, modification of milk in accordance with the physiological requirements and with the infant's symptoms, and the modification of food in difficult cases and special conditions compose other chapters in Part 1 is very timely on development and physiology of infants. It has an appendix on receipts of substitute foods, composition of different milks and patent foods, and subsidiary methods of feeding—lavage, by

nose, rectum, subcutaneously, and of premature infants.

The author does not openly say for whom the work was intended, only mentioning nurses and practitioners as having decidedly favored it. We deem it sufficiently well worded as to be of value to all interested in feeding infants.

Musser's Medical Diagnosis. New (5th) edition. A Practical Treatise on Medical Diagnosis for Students and Practitioners. By John H. Musser, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals; Consulting Physician to the Woman's Hospital of Philadelphia and to the West Philadelphia Hospital for Women, to the Rush Hospital for Consumptives and the Jewish Hospital of Philadelphia; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians; President of the American Medical Association, etc. New (5th) Edition, Revised and Enlarged. In one octavo volume of 1213 pages, with 395 engravings and 63 colored plates. Cloth, \$6.50; leather, \$7.50; half morocco, \$8.00, net. Philadelphia and New York: Lea Brothers & Co., Publishers.

"Musser's Diagnosis," new (5th) edition, is before us, and, we feel it needless to say, almost, that there is no more exhaustive work. The arrangement is excellent. General considerations, comprising "The Data, Methods and Objects of Diagnosis," and "The Morbid Processes and Their Symptomatology," comprise Section I. Historical, subjective, objective, physical and laboratory diagnosis comprise other sections, whence special diagnosis takes up sections of body in and character of disease. Dr. Musser's care in the selection of assistance on special subjects has been of extreme avail, and the excellent expression of the text renders the subject all the more lucid and interesting. The book is profusely illustrated and judiciously, for we do not find a picture that does not well illustrate the condition at hand. It is here well to mention the excellence of the skiagraphs and blood fields shown. The best that can be said of a medical diagnosis is that the methods are of avail when put into practice. We can say this for the above work.

The Physician's Visiting List (Lindsay & Blakiston's) for 1905. Fifty-fourth Year of Its Publication. The Dose Table herein has been revised in accordance with the U. S. P., 1900. Philadelphia: P. Blakiston's Sons & Co., 1905.

The Editor and Manager of **THE AMERICAN PRACTITIONER AND NEWS** has used this visiting list for years. There is so much satisfaction in its use that we wish for no better one. Its prices are very reasonable.

Society Proceedings.

PROCEEDINGS OF LOUISVILLE CLINICAL SOCIETY.

OCTOBER 11, 1908.

REPORT OF CLINICAL CASES.

Dr. Morris: This little one is eighteen months old. I delivered the mother eighteen months ago. The baby at that time was apparently normal. The baby was above the average in size and weight, and I saw it a few times, and it seemed to be a natural baby in every respect. I lost sight of it until a month ago. The mother brought it to me at that time and gave this history: That for ten months after the birth of the baby it did well. It was raised on the breast, but at the end of the tenth month the baby began to decline and lose flesh, when she brought it to me, when I found it in a very much reduced state, and I have seen it for a month occasionally.

When it came to me at first we discontinued the breast and put it on fresh cow's milk, and gave it a small amount of pure cod liver oil, and I increased it gradually, until it is now taking a drachm of pure cod liver oil every three hours. It is taking cow's milk apparently very well, assimilating it very well, still the baby does not improve. It is in about the same condition as when I first saw it. It does not gain flesh, cries all the time, sleeps but little, and seems always to be in misery. The mother tells me that during the time she was nursing the baby the milk did not seem to agree with it. It had frequent stools, and the food was not digested. Since putting it on cow's milk it seems to be better still the baby has not improved.

To my knowledge the mother has been healthy. The father died thirteen months after the birth of the baby. At the time of the birth of the infant the father seemed to be in perfect condition and for six months after.

Would be glad if the gentlemen of the Society would examine the baby and discuss the case.

Dr. Weidner: I think we all agree that we have to deal with a case of marasmus. That does not mean much, however. When I first saw the baby brought in I said that it looked like a cretin. I take that back. I think from the appearance of the infant and from the history that the doctor has given us, from the continuous bad nutrition

of the child, the large abdomen, the large glands which are found at the back of the head, the enlargement of the superficial glands of the groin, the slight development of the teeth, that we have to deal with a case of marasmus. I think, however, that this is a manifestation of tuberculosis. In addition to that the child has curvature of the spine; the child has weak muscles; they have been sitting it up. We have a permanent change here in the spinal column, not the simple, ordinary curvatures we see where the muscular system is weakened as in delicate children. We feel a slight prominence at the sternocostal junction, and we thought that it was a rachitic condition. It is not well marked, and the bones show no evidences of rachitis. The child's head is rather large. The fontanelles are pretty well closed, and are not abnormal; this would also speak against rachitis.

My diagnosis would be that we have to deal with a tuberculosis, especially since the history points a little that way.

Dr. Coomes: I just wish to say that this child has no teeth, and it looks to me like it is also syphilitic.

Dr. Griffiths: I just want to criticize cod liver oil. I do not think the child can assimilate it. It would be better if the doctor would give it cream, panopepton, fresh air and sunshine.

Dr. Satterwhite: I do not think the head is out of proportion to the age of the child. The emaciation makes that appear more marked. It reminds me very much of a case that I had a number of years ago, and it struck me that child was a neurotic baby, and that the nervous system is at fault. It needs nerve food. It was so exemplified in the case I had; the baby cried continuously day and night; we had to have two nurses; I, of course, gave occasional medicines to make it sleep. It gave me a great deal of worry until I put it on good large doses of the hypophosphites. I do not think it was a week until it was sleeping soundly and well.

So far as any taint is concerned, we are all prone, where the cases are of an obscure kind, to ascribe some specific trouble as the cause. I can not imagine this baby eighteen months old having tuberculosis and looking as well as it does and living as long as it has. The nutrition, of course, is at fault. The nervous system is mostly the cause of it.

The actions show that the infant is taking too much oil, and that ought to be stopped; the oil should be given by inunction, and as a shot gun prescription which would do this baby no harm and at the same time bring in Dr. Coomes' diagnosis. I suggest that the doctor

administer the hypophosphites. Furthermore, a preparation of arsenic, Fowler's solution, a fraction of a drop incorporated in each dose, would, in my opinion, be worth trying on this baby.

I sympathize with the mother because I know from experience that a baby that is crying all the time is evidently in pain and discomfort, and it is distressing not only to the family, but to the doctor as well.

Dr. Abell: I have made but a limited examination of the baby, and concur in the views expressed by Dr. Weidner that the case is one of tuberculosis. The absence of the lumbar curve, the prominence of the spine in this region, the rigidity of the lumbar muscles on either side, the absence of motion between the vertebra as evidenced in a well child when it is placed on its face and lifted up by its heels, point to tubercular disease of the lumbar region. The mother states that this has developed within the last three months. With the distress that occurs in a condition of this kind, we can explain the other condition present. The glands are enlarged. There has been no breaking down of the vertebra, and there is no accumulation on either side of the psoas muscles, nor has there been any extension down as far as the pelvis.

The general treatment, as outlined by the doctor, is all that could be wished, but the vertebral column should be placed at rest. As soon as the baby is placed in the upright position the weight of the body only increases the deformity which is already marked. With the involvement already present the outlook is not bright.

In regard to the absence of teeth, I would not take this as a perversion due to syphilitic taint. There is nothing characteristic of syphilis appearing in the primary set of teeth. It is only in the secondary teeth that we can get anything that is characteristic of syphilis in the child following the disease in the parents.

Dr. Irwin: Gentlemen, you have covered the ground so well that there is very little to be said. Time, I think, will effect the proper changes in this case, and it will not be very long. All our skill will never straighten that spine. There is no question in my mind as to this being tuberculosis. There is a very serious question as to whether there is a syphilitic taint. While it is true four or five children born in the family were without evidence of syphilis, this one may be tainted, but we have no evidence that the father was syphilitic, and there is no evidence that the mother is syphilitic. She has had four other children, living, well. One child died much in the same condition as this one is.

Of course, "while there is life there is hope," but it strikes me as physicians we are not always bound to save life. If we do in some cases we will only entail misery. That is all that can be done in this case. This is undoubtedly a tuberculous child; this condition of the spine must be tuberculosis. Eleven months is early for this disease.

As far as your cod liver oil, your cream and arsenic are concerned, I would throw them all to the wind. Let nature take its course. If you could prolong the life of this child it must ultimately become a cripple. I don't see why we, as physicians, should want to prolong the life of a child like this. I do not think we are called on to prolong suffering. We can not cure this disease. Why should we torture the child with remedies? Why prolong this life when that is all that we can hope to do. I think the most merciful thing would be to relieve its pain and let nature take its course.

Dr. W. H. Wathen: In deciding the question as to the duty of the physician to prolong life when he has made the prognosis that the patient must continue to suffer with an incurable disease which will finally cause death, we must consider it in its professional, political, moral and religious aspects. This question has been very extensively discussed within the last few years, and there have been two opinions in regard to the duty of the physician. One is the opinion advanced by Dr. Irwin, and the other is that it is the duty of the physician to prolong life at all times as far as he can. I am inclined to the latter opinion, for we can seldom positively tell how long we can prolong life, and we have found that when we thought we could not prolong life, we finally would entirely cure our patient and make of him a useful citizen.

There are instances where it is of the very greatest importance to prolong life, even if not for many months or many years. There may be certain inheritances in money, or there may be the inheritance of empire and descent of power where this might be a very vital question, and the peace and happiness of a country might depend upon it. Therefore, I am inclined to the opinion, in deference to the demands of the friends of the diseased person, and in deference to public claims, that it is our moral and professional duty to do what we can to prolong life as far as possible. Therefore I would suggest in this case, to relieve the pain as much as we can, and give something to improve the nutrition.

If this mother has given birth to several healthy children and now gives birth to a badly diseased one as we see here tonight, this can not

be a syphilitic inheritance unless the mother has contracted syphilis since the birth of the other children. If the father contracted syphilis after the birth of the other children, or before the birth of this child, and has not infected the mother, then the child would be born free of syphilis. I do not think it is possible for a father to infect a child, except indirectly, by infecting the mother.

In this case we need to improve nutrition in every possible way. I would give arsenic, preferably in the form of cacodylate of soda. With this we can give twenty times as much arsenic at a dose without getting the injurious effects, hence get better and quicker therapeutic effect. In one case of bad nutrition I gave what is known as bone marrow. The child got well. I do not know whether the bone marrow did it or not, but all other means had failed after long continued treatment.

Dr. Satterwhite: I have a great deal of sympathy for this case, and I agree with what my friend, Dr. Abell, has said. I do not see why we can not put a plaster on this case, as it will not conflict with any line of treatment that Dr. Morris wants to introduce. I would suggest to Dr. Morris that he put a plaster jacket on the baby, and if it should be spinal curvature it would be of benefit to the child.

Dr. Morris (closing): I thank the gentlemen for the discussion of this case. I brought the baby down this evening with the view of listening to the discussion, and see if I could learn something more about it. There does not seem to be a very clear idea as to the former condition of the child and its present condition. Some have the idea that the condition of the baby has not improved since I have been giving it cod liver oil. When I first saw it the mother told me that it was having from ten to fifteen discharges each day, of a greenish character. Since it has been taking the cod liver oil and the cow's milk it is only having three stools in the twenty-four hours, improved in character, showing that the cod liver oil is not doing any harm, but is agreeing with it, and it does seem to me that cod liver oil is the thing it needs.

As to the curvature of the spine, I would offer this as a probable explanation. The child is constantly nursed or placed on a stool in an upright position, and I believe the condition is due to that.

As to a tubercular condition, I do not think it is present. The child has never had any elevation of temperature, but on the contrary has always had a subnormal temperature.

Dr. Wm. Cheatham, presented paper, "Report of Eye Cases" under original articles page 641.

DISCUSSION OF PAPER.

Dr. Morris: I was exceedingly interested in the doctor's presentation of cases, especially the last one, which only serves to show us that there is always danger in an anesthetic, and I believe we should always look at it as something in which there is great danger. In talking with a surgeon not long ago he told me that he had had several deaths from anesthetics, and he mentioned that he had had a death the week before. It seems to me that it is a matter of greater seriousness than we have been willing to believe.

Dr. Dabney: In regard to the first case reported by Dr. Cheatham, it would be impossible to express any opinion except that it was doubtless necessary to remove the eye from the extension of the growth. It is always a deplorable thing to remove a sound eye. I should think the prognosis is fairly good.

In regard to the second case which I had the pleasure of seeing with Dr. Cheatham, I had a patient from the same town in my office yesterday, and she told me that she went to Cincinnati, and the doctor removed the eye.

The ophthalmoscopic appearance indicated that this foreign body entered at the sclero-corneal junction. There could be no question as to the advisability of trying the magnet. We had no magnet in Louisville of the Haab make, which is a very costly instrument. The consensus of opinion is that it is the most powerful magnet in use for such purposes.

Haab himself, unless he has changed his mind recently, is inclined to draw the foreign body out anteriorly, first drawing it into the anterior chamber. It is possible that he has changed his mind, but I have not seen a report of this.

I looked over the literature, and glanced at Knapp's article in "His System of Diseases of the Eye," and he speaks as though it were customary to draw a foreign body to the front of the eye and treat it that way. It would appear that the danger of detachment of the retina would be increased by making an opening through the sclerotic near the supposed site of the foreign body. Each method has advantages which must be balanced by clinical experience.

In regard to sympathetic ophthalmia, it is a well known fact that cases very rarely occur inside of twenty-one days, though one has been

reported within two weeks of the injury. More cases occur between the third and sixth week. If an eye is to be enucleated, it ought to be enucleated before the end of the third week. I mean if the eye is blind and a source of danger to the other eye, it is unsafe to postpone enucleation four or five weeks. It had better be taken out before that period arrives.

The removal of an eye is always a serious question; of course it mutilates the man or woman for life, and should not be undertaken lightly. It is not every case that requires enucleation, but it is of great importance that the danger should be explained to the patient. If they are going to leave the city, where they can not have prompt and skillful advice, it would be better to have the eye enucleated. Much depends on the social condition of the patient; much depends on how soon they wish to return to work. We would be more willing to carry a slight risk in a young girl than in a negro laborer.

A death from chloroform is a sad thing. There is no more skilled anesthetist in the city than Dr. Ireland. He administered it to me, first chloroform and then ether. He gives it skillfully, and in addition has the knack of inspiring the patient with confidence.

A man who gives chloroform three or four thousand times is bound to have a death some time.

Dr. Flexner: In referring to the Haab magnet I remember an address in which he spoke of copper the most dangerous, and then I think steel and iron. What I should like to have brought out is the pathology of the sympathetic condition. What I know of the subject is not clear to me. I think there might be some light thrown on it.

Dr. J. R. Wathen: I wish to speak of one point from personal experience with the Haab magnet. Of course I do not know the strength of the Haab magnet, but from the photographs I have seen of this magnet I should judge that it is no larger than those sold in this country, which are guaranteed to pull one thousand pounds.

My personal experience is limited to two cases, both referred to me with foreign bodies in the hand, needles, about one inch. Under cocaine I operated, and could see the needle lying at the bottom of the wound by means of the fluoroscope, and could at times almost touch the needles, but could not remove them. I then resorted to the Haab magnet, introducing the curved piece into the wound and turning on the current gradually. The current at times was strong enough to draw a knife out of the hand, but could not draw these small needles, one-fourth of an inch in length, through one-fourth of an inch of the

hand. This was tried in two cases. I treated these two cases with carbolic acid used in the wounds to cause local necrosis, and I found the needles in both wounds three days later.

As to the case of death from anesthesia, I had Dr. Ireland recently administer an anesthetic to an old man seventy-four years of age, feeble, with intermittent pulse, and I removed a stone from the bladder and also removed the prostate gland. He certainly handled this case with ease, and I think he was simply unfortunate in this case. There seems to be no more competent man in Louisville.

Dr. Satterwhite: I wish to speak only of the case of death from the anesthetic. Of course we all recognize that there is no more competent anesthetist than Dr. Ireland. These cases have happened many times, and will continue to happen. I think it is always unwise to continue giving an anesthetic to a patient that struggles violently. I can imagine, though I can not say positively, that it is harmful, more particularly if they give ether. I have seen ether administered where I really thought it was cruel. I would not want to have ether administered to me, as I have seen it administered, suffocating the patient with the cone placed over the mouth. While in New York I saw a new instrument known as the Bennet Ether Inhaler. I saw ether given to children without any struggling at all. Nitrous oxide gas was first given, and then, after getting them under the influence of that, ether was administered and kept up. It just seemed to me the ideal instrument for giving an anesthetic, and it has been given in the Ruptured and Crippled Hospital there hundreds and hundreds of times. I have seen it given in dozen of cases of children, and there was practically not a struggle; they did not know that they were taking anything at all.

I wish simply to call the attention of the gentlemen to that instrument, and I think we ought to have one here, as I do not see why we should not use it.

Dr. Griffiths: I have never used anything but chloroform, and have never lost a case from its use, and will give chloroform the rest of my life if I can get it, and can control the man who is giving it for me.

Dr. Coomes: I was much interested in the report of Dr. Cheatham's cases. I first want to speak of chloroform. This thing is going to happen to all of us some time or other. I have never seen a death from chloroform, but have been in a number of scraps. Immunity of the patient from repeated administrations does not amount to anything.

A man died in the City Hospital who had had chloroform given to him three or four times, and the last time the man was dead before you could think about it, showing something wrong with the man or the chloroform.

As to Dr. Cheatham's first case, where he had to remove an eye as a result of inflammation of the globe, I removed an eye eighteen months ago where the man had been shot. and I had sacrificed apparently a pretty good eye. The man has had no trouble since ; the ophthalmia has advanced but little.

The most important thing that the doctor mentioned was that of the removal of foreign bodies from the eye, when and how it should be done, and finally that thing we call sympathetic ophthalmia. I think there should be a close watch kept on a man that has a threatening ophthalmia ; he can not be watched too closely ; we do not know what is going to happen at any hour. At the same time I believe I have removed eyes that ought not to have been removed. I saw a man with a piece of steel lodged behind the lens ; it became encysted and remained there for years. The lens became cataractous. He came to see me and wanted me to remove it, but I refused, believing that the piece of steel could not be brought out with the lens. Another gentleman in the city removed it, leaving the steel behind, and he lost the eye. It is also known that copper, the most dangerous, is carried a long, long time. I believe Lawson reports a case where a man carried a piece of copper in his eye for nineteen or twenty years, and then had sympathetic ophthalmia. An eye that is blind following an injury, if it is any way painful, should be gotten rid of.

As Dr. Dabney said, much depends upon the station in life. Do not take chances on a laboring man ; in other words, take no chances of losing a good eye. If the patient is in different circumstances, you may carry him along for some time.

I remember seeing, some years ago, a man who had cut his eye on a bottle ; it looked like a mass of jelly ; the man saw light. The cut extended across the ciliary region above and below ; I put silk sutures in the tissues above and below, and the man recovered ; he has a cataract.

With a foreign body it is always a serious question, and certainly when the eye is blind, and the man a laboring man and has to make a living, it is better to get rid of it.

Dr. Marshall : I just simply wish to say, in regard to anesthetics, that those of us who have given it many times without any trouble

may find that the very next death may be ours; therefore, we ought to be charitable and throw the cloak of sympathy around the man who has had this trouble.

In regard to foreign bodies in, or injuries to the eye, my work has been with the laboring class, and I have always thought it best to call in a specialist in cases of serious injury to the eye. Wherever he has said that the sight of the eye has been lost, and the question of the removal of the eye came up, I was always in favor of removal, believing that it was to the advantage of the man to get back to his work as soon as possible, and to avoid the danger of the trouble extending to the other eye.

Dr. Weidner: I would like to ask a question. I have been partial to chloroform in my experience, and still I recognize that ether is being preferred by the majority of surgeons to-day. The method I have in mind is to administer a quarter of a grain of morphine and one one-hundredth and fiftieth of a grain of atrophine hypodermatically one-half hour before giving the ether, with the object of lessening the irritation of the nasal and respiratory passages. Would there be any objection to this method? It is claimed to be ideal, the ether being used by the method of Esmarch, and only one or two ounces used during the operation. If this could be done I would turn over to ether.

Dr. Willmoth: I am afraid to say anything along this anesthesia line because it is such a large field. In reply to the question of Dr. Weidner, I believe that the reason that morphine is not given is that by putting the patient under the influence the pupil reaction is controlled, and we can not tell when the patient is getting in the dangerous zone.

As to the use of chloroform or ether, I think the majority of anesthetists give ether on the open cone like they give chloroform. It is much safer, and I think it is cruel when we see it given as it sometimes is. Most of us give it now with the open cone, an Esmarch inhaler with eight or ten thicknesses of gauze.

There is one thing that always struck me with the administration of anesthetics—both chloroform and ether—and that is we take pains to examine the patient's heart to see whether he can take it, and the majority of deaths have been among those who have been reported as being in perfect health. Those patients having heart lesions as a rule take it kindly.

I have been very fortunate never to have lost a case. A negro died

at the City Hospital from the effects of the anesthetic on whom I was going to operate. He was a strong muscular fellow, and had been looked over, and pronounced all right. While the anesthetic was being given him he struggled hard and suddenly quit breathing. He died from paralysis of the respiratory center.

I have noticed in the hospitals that when the patients do resist there is a tendency to hold them firmly to the table; they jump on the patient to hold him down. This is a great mistake, I think. They should be allowed some freedom and only restrained sufficiently to keep them on the table.

If we hold them the respirations are so deep that enough of the anesthetic is taken in at a breath to produce paralysis of the respiratory center and respiration stops.

Dr. Cheatham (closing): My experience with alcoholic patients is that they always take anesthetics badly. Those who struggle while taking it get it too rapidly; their pulse and respirations are increased, and they get it too rapidly. There is no one in Louisville that I would rather trust in giving an anesthetic than Dr. Ireland. It was not his fault.

As to the importance of the magnet in removing foreign bodies from the eye, we all remember the case of Dr. Williams, of Cincinnati, who was sued because he had failed to use the magnet in a certain case in which the injured eye was lost, and he was censured very much for not employing it.

Fisher, of Chicago, reports one hundred cases of foreign bodies in the eye, with 86 per cent. of safe removals with the magnet. It is marvellous how these foreign bodies can enter the eye and produce such few symptoms. I have had two cases, and the patients never knew when these foreign bodies entered; the foreign body could be seen in the lens though they had never known that the accident had happened. The lens was removed and the foreign body found imbedded in it.

Some years ago, while in New York, in giving an anesthetic, I came near losing a patient from ether. At the Louisville Medical College I had a fine specimen of Irish girl eighteen years of age that came to me to have an eye removed; all the organs seemed sound. She came on Saturday, alone, and I told her to return the next Saturday and bring her sister with her. While giving the anesthetic we came near losing her. The only thing that brought any response was the retraction of the tongue. She soon came through.

Dr. J. R. Wathen: If the Society is not too tired I have a few specimens that I would like to exhibit. I have no written report of these cases, and will simply give them briefly.

This first case I have to present is a woman, Mrs. O., aged forty, mother of seven children. The uterus is quite large. It is shrunk, of course, in the strong alcohol. There was ulceration on one side of the cervix. Has lately been troubled with hemorrhage between her periods. The uterus was turned back and bound down by adhesions, and the operation was undertaken for the relief of these conditions; there was also a question as to whether it was malignant. The history of the case, age and the uterus at the same time indicated that.

I removed this by a vaginal hysterectomy; I had some trouble separating the adhesions posteriorly, and I wish to call attention to two points connected with this operation. As I said, the uterus was bound down by adhesions, and she had hemorrhages between her menstrual periods, and I believe in all cases as regards malignancy we should do a complete operation and not attempt too much in the line of curetment, hoping that will relieve this condition, because curetment does no good.

As to the technique of this operation I have modified it somewhat from that which I formerly used. After separating the cervix I placed a small clamp on the uterine artery. I have never found the uterine artery as low as the authorities say; it is not in that neighborhood. It is about one inch from the ovarian artery in every case I have seen in the dissection. In order to control the hemorrhage better and in order to bring the uterus down better in the vagina, I use a larger clamp on the first portion of the broad ligament. I prefer to use this larger clamp on the first portion and to use a smaller one than usually employed on the second portion. Another point I wish to call attention to in the technique of this operation is that we should always grasp the posterior wall of the vagina as soon as we separate it. Formerly I would pack the gauze around the forceps tightly. We should use simply enough for drainage and to keep the intestines out of the way of the forceps.

Now, in regard to the next case, Mrs. N., aged twenty-six (the first case was done on last Saturday, this case I now show was done nine weeks ago) had been married for a year and a half; she weighed, when married, 135 pounds. When operated on a year and a half afterwards she weighed less than a hundred pounds; she now weighs, after the operation, ten more pounds than when operated on.

This uterus was somewhat enlarged; there was procidentia, at times the cervix protruding from the vagina. When first married she complained of having great trouble with sexual intercourse; her husband was unable to have sexual relations with her, and a few weeks before she was operated on every time he would attempt intercourse with her she fainted.

I was called in consultation with her physician, and when I examined her in her home she came near fainting. It was simply a nervous condition associated with this procidentia that made life unbearable. A few weeks before the operation I introduced a pessary, hoping to benefit the woman; it seemed to benefit her but little, and I told her the only hope was to take the uterus out. She has fully recovered. It is now nine weeks after her operation, and her husband has had no trouble.

Another point that caused this trouble is the ovaries, which are twice or three times as large as they ought to be. The ovary in the bottle, as you can see, is fully two or three times as big as it should be. The uterus was larger than normal, and associated with this was procidentia. These were sufficient, I think, to give rise to the symptoms. The symptoms were not exaggerated, as you can see from the loss of weight.

The next case, Mrs. C., aged thirty, was operated on at the City Hospital. This woman gave a history of pain in the pelvis, and I operated for an enlargement, thinking it was a pus tube. When I opened the abdomen above I found an intraligamentous cyst between the layers of the broad ligament. It was fully twice as big as it now is. In the operation, by simply splitting the broad ligament, I was enabled to remove this with very little trouble. This cyst growing from the parovarium, though not very large at the time of operation, would soon have grown to a large size, and would have given her trouble.

Dr. Flexner: I believe the condition of the woman was due to nervousness at the time of sexual intercourse. Could it not have been relieved by ventral fixation?

Dr. J. R. Wathen (closing): I am not satisfied with the operation of ventral fixation. I did three at the City Hospital during my last spring term, and some of them have fallen back, and I believe the operation as done by Howard Kelly will pass out of use.

EAGLE VALLEY MEDICAL SOCIETY.

The first regular meeting of the Eagle Valley Medical Society took place at Sanders, Ky., October 4, 1904.

Following are the officers for the ensuing year :

Dr. W. L. Nuttall, New Castle, Ky., President.

Dr. J. M. Stallard, Sparta, Ky., First Vice President.

Dr. B. L. Holmes, Carrollton, Ky., Second Vice President.

Dr. J. W. Botts, Owenton, Ky., Secretary and Treasurer.

This Society is composed of the counties of Owen, Henry, Carroll and Gallatin, and has brought about a thorough organization of the medical fraternity of the counties mentioned, and much good is anticipated from the same. One step already has been taken along this line when the society, at the meeting, by a unanimous vote endorsed the movement advocated and presented by Dr. F. J. Yager, of Campbellsburg, for the prevention of criminal abortion.

The following programme was rendered :

Paper : "Cholelithiasis"—Dr. S. E. Hampton, Milton, Ky.

Address : "Our Society, Its Future"—Dr. W. G. Birchett, Owenton, Ky.

Paper : "Pneumonia"—Dr. R. W. Porter, Port Royal, Ky.

Paper : "Acute Gangrenous Cholecystitis, with Report of Cases"—Dr. F. W. Samuel, Louisville, Ky.

The Committee on Programme and Arrangements reported the following programme for the next meeting on May 9, 1905 :

Paper : "Acute Articular Rheumatism"—Dr. H. S. Rowlett, Ghent, Ky.

Paper : "Typhoid Fever"—Dr. W. B. Messink, Worthville, Ky.

Paper : "The Medical Treatment of Appendicitis"—Dr. B. L. Holmes, Carrollton, Ky.

Paper : "Glaucoma"—Dr. Wm. Cheatham, Louisville, Ky.

It should be understood that this Society does not impede the progress of our county societies, but on the contrary will assist in the development and influence and will act in perfect unison with them, as well as the State Association of which they are the component parts, and only physicians who are members of their respective county societies are eligible to membership in the Eagle Valley Medical Society. This should be borne in mind, and all who were not present at our last meeting, and who so desire can have their names enrolled by sending same to the Secretary, together with the initiation fee of one dollar.

Correspondence.

The Bourbon County Medical Society held its regular meeting in Paris City Council chamber, Thursday, October 13, 1904, at 3 P. M. The following papers were read: "Clinical Charts, Malaria," by Dr. C. G. Daugherty; "Collis' Fracture," by Dr. A. C. Wilmott. Discussion opened by Dr. D. B. Anderson, and "Hemorrhoids" discussed by Drs. C. B. Smith and W. C. Wilkerson. Dr. W. Fithian, President; Dr. F. L. Lapsley, Vice President; and Dr. C. G. Daugherty, Secretary, are the officers of the Society.

DEAR DOCOTR—The Bourbon County Medical Society, at its last meeting, decided in accordance with Section 5, By-laws, that its next regular meeting should be devoted entirely to discussion of subjects for the good of the profession. With this in view, the following programme has been arranged for Thursday, November 10th, beginning at 3 P. M., in Paris City Council chamber:

"Medical Ethics"—Frank Clarke, Lexington, Ky.; discussion opened by Dr. W. M. Miller, Millersburg, Ky.

"Fees, Etc."—Dr. Frank Fithian; discussion opened by Dr. W. C. Ussery.

"Relation of the Health Officer to the Profession"—Dr. Silas Evans; discussion opened by the Secretary.

"Pauper Practice"—Dr. F. M. Faries; discussion opened by Dr. John A. Gilkey, North Middletown, Ky.

After the conclusion of the programme, Dr. C. G. Daugherty will entertain the Society at 6 o'clock dinner, at the Elks' Cafe, and the meeting will be resumed in informal manner at Fithian & Daugherty's office with discussion of programme or social session.

The Councilor for the District, Dr. J. E. Wells, expects to be present at the meeting.

Your presence is needed to make this meeting a success.

Very respectfully,

C. G. DAUGHERTY, *Secretary.*

F. L. LAPSLEY, *President.*

PARIS, KY., November 3, 1904.

Dr. Duncan L. Bulkley will give a sixth series of clinical lectures on "Diseases of the Skin" in the Outpatient Hall of the New York Skin and Cancer Hospital, on Wednesday afternoons, commencing November 2, 1904. The course will be free to the medical profession. The Skin and Cancer Hospital is located on the corner of Indiana avenue and Nineteenth street, New York.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

VOL. XXXVIII. LOUISVILLE, KY., NOVEMBER 15, 1904. NO. 160.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way, and we want downright facts at present more than any thing else. — RESKIN.

Original Articles.

THE OPHTHALMOSCOPE IN DIAGNOSIS.*

BY SAMUEL G. DABNEY, M.D.

*Professor of Ophthalmology and Clinical Professor of Otolaryngology,
Hospital College of Medicine, Louisville, Ky.*

A new edition of Sir William Gowers' work on medical ophthalmoscopy has lately appeared. A somewhat careful perusal of this book has led to the selection of my subject to-night, and indeed for much of what I will say I am indebted to this author.

In diseases of the brain ophthalmoscopic examination is most often of value in tumors, meningitis, abscess and hemorrhages; less frequently in anemia, hyperemia and in softening.

Optic neuritis occurs in about three-fourths of the cases of brain tumors. It is not indicative either of the situation or the character of the growth. It has been found in tumors of the cerebral hemispheres, the cerebellum, the pons and crura. It occurs equally with glioma, sarcoma, tubercle and syphiloma.

Though it is now generally accepted that the inflammation of the papilla is in great measure due to descending neuritis, yet the additional influence of increased intracranial pressure is indisputable. It is important to remember this, as in a number of cases the neuritis was relieved by trephining even when the tumor was not removed. The optic neuritis is often a temporary incident in the development of

* Read before the Louisville Clinical Society.

the growth; it may be late in occurrence; it may subside, generally with subsequent atrophy, while the tumor progresses. It is nearly always bilateral. In rare cases it is unilateral, and then is most apt to be on the same side as the growth in the brain. The two eyes may be affected at the same time, or there may be an interval of months, perhaps a year, before the second eye becomes involved. It is of great importance to remember that good sight, sometimes perfect sight, may exist in optic neuritis. The following case illustrates many of these statements, and is of interest from the slight, yet characteristic, symptoms in the beginning, and from the fact that atrophy occurred in one eye before the inflammation began in the other.

On August 14, 1900, a young married woman of exceptionally healthy appearance and of about thirty years of age, was referred to me by her family physician for an examination of the eyes. This was thought advisable because of frequent headaches.

There was only a trivial error of refraction, and no glasses were prescribed. In addition, however, to the headache, she complained of some numbness on the cheek below the left eye; the pupil of this eye was partially dilated, and did not respond well to light; the vision of each eye was perfect, but what was most suspicious was a slight inflammation in the left optic nerve, not by any means a choked disc, but a blurring of the outlines of the nerve and a fullness of the blood vessels.

From these symptoms I expressed the opinion that the patient was suffering from some intracranial disturbance, probably a tumor. The attending physician concurred in this opinion.

I saw the lady no more for seven months, that is, until March, 1901. I was then consulted for a sharp attack of "pink eye" from which she was suffering, and which was prevailing as an epidemic. This trouble was soon relieved, but an examination of the left eye showed that vision was reduced to light perception, and the ophthalmoscope showed well marked atrophy of the nerve. The sight of the right eye was perfect and its fundus normal.

I was informed that the headaches had become more frequent and more severe, that many doctors and many remedies had been tried, including electricity and a rectal operation, but in vain.

Urinalysis had been made at the time of my first examination and several times afterwards with negative results; the numbness in the face continued, and on several occasions there had been slight twitchings

of the facial muscles, with momentary loss of consciousness. There was no vertigo, no disturbance of gait and no paralysis.

The patient was attending to her household duties except for the interruptions by headache, and was generally in good spirits.

There was no disturbance of the intellect. These symptoms continued the same for several months. Then she suddenly had an epileptic convulsion. After its subsidence there was no change from her former condition. A few weeks later another convulsion occurred.

About this time, September, 1901, more than a year after the optic neuritis was observed in the left eye and several months after it had gone on to atrophy, inflammation began in the right optic nerve. Fortunately, its sight was good, and so continued to the end, despite well marked neuritis. The lady died in a convulsion in May, 1902, twenty-one months after the first discovery of her disease. There had at no time been any disturbance of mind, nor of speech, nor of motion, the convulsions excepted. A post-mortem could not be obtained but, the diagnosis of brain tumor seems almost beyond question. Among the many medicines used were iodide of potash and mercury in large doses, although not the faintest trace of a specific history could be obtained.

In meningitis the ocular changes are of two kinds, tubercles in the choroid and optic neuritis. It is noteworthy, however, that tubercular deposit in the choroid is far more apt to accompany an acute general tuberculosis than to accompany tubercular meningitis.

The frequency of optic neuritis depends on what part of the meninges is inflamed. It is common in meningitis at the base, but rare in meningitis confined to the vertex. This latter condition (inflammation of vertex only) is exceptional in tubercular meningitis, and hence we find an inflammation of the optic nerve often an aid in diagnosing this disease. Gowers is of opinion that decided changes in the nerve head occur in one-half the cases and slight changes in most of the others. In at least one-third of the cases of tubercular meningitis he believes the ophthalmoscope may be a valuable help in diagnosis.

In abscess of the brain optic neuritis occurs in not less than two-thirds of all cases. The more acute the abscess formation the more likely is inflammation of the optic nerve to occur. It is less common in the chronic cases.

The state of the circulation in the eye and that in the brain do not correspond so closely as is often supposed. Indeed, ophthalmoscopic

examination, according to Gower's, sheds little light upon the question of cerebral hyperemia or anemia, perhaps, as he suggests, because of the intraocular tension and the various anastomoses.

Retinal hemorrhages occur in a considerable number of cases of cerebral hemorrhage, and furnish an indication of considerable value. The most frequent cause of cerebral and retinal hemorrhage is chronic renal disease.

In cerebral softening marked ophthalmoscopic changes are rare.

Of diseases of the spinal cord one especially is marked by important ocular complication. This, of course, is locomotor ataxia.

The pupil, usually small, but occasionally dilated and in either case irresponsive to light, and the transient or permanent double sight, are important and frequent early symptoms, but the subject this evening confines our attention to the disease as revealed by the ophthalmoscope. Optic neuritis is very rare, but optic atrophy is common. In four hundred (400) cases of tabes, Gowers found atrophy in 6.5 per cent. A large majority of cases of simple atrophy have this association. The atrophy is more apt to be an early than a late symptom, but it may occur in well developed ataxia. Frequently, the disturbance of gait remains very slight. The diagnosis may rest on the optic atrophy, failure of the pupil to contract to (even before blindness), and loss of the knee jerk, alone.

In various affections of the orbit the ophthalmoscope may aid us in diagnosing the extent and situation, if not the character, of the disease. Thus within the last few weeks I was confirmed in my decision to exenterate the orbit because of a sarcoma in its upper inner part by the presence of optic neuritis. The sight in the eye was still good (20-50), but besides the dilated pupil there was well marked papillitis. The case, being distinctly surgical, need not be related here further than to mention the aid of the ophthalmoscope in determining the involvement of the nerve back of the eye. The following case illustrates how ophthalmoscopic examination may sometimes assist us in diagnosis of injuries to the head. A few months ago a youth of about eighteen consulted me on account of blindness in the right eye. He stated that some months previously he had received a severe blow on this side of the head. Loss of sight was immediate, and had continued ever since. The ophthalmoscope showed the retinal vessels normal, but well marked atrophy of the optic nerve. The nerve had doubtless been lacerated or compressed by a fracture through the optic canal.

In Bright's Disease three changes in the fundus of the eye are

found, small arteries, with an unusually broad and bright light streak, hemorrhage and retinitis. The first two conditions may exist singly or together, alone, or may be associated with the third.

The most typical is the inflammation of the retina generally associated with optic neuritis and retinal hemorrhage. The frequency with which albuminuric retinitis occurs in Bright's Disease is not exactly known. Doubtless, in many cases it is overlooked. In one hundred (100) cases of chronic nephritis, Hales found retinal changes one in $3\frac{1}{2}$ cases. This is probably the maximum. Such changes are the most common in the granular kidney. The albuminuria of pregnancy, too, seems especially prone to be attended by them. The outcome in the cases of pregnancy is often very good.

The following case is an illustration: In May, 1898, a young married lady in about the fifth month of her first pregnancy, was referred to me by her family physician for failing sight. This was the more alarming, as he had discovered albuminuria. The vision of one eye was 20-50 and the other was 20-100. In each eye there was a well marked retinitis, with hemorrhages.

In a few days labor was induced and successful delivery accomplished. Puerperal mania, however ensued, for which the patient was sent to an institution in a neighboring State. After some months she made a complete recovery. An examination of the eyes in the following fall showed that the retinitis had disappeared, and that the vision was perfect. It is important to note that perfect sight, or sight but very little impaired, may exist with this form of retinal inflammation. I have seen several such cases where the ophthalmoscope was the first to reveal kidney disease, the patient having consulted the oculist on account of headache or dizziness which were supposed to be due to eye strain. The picture of retinitis of this variety is frequently so typical that the oculist is warranted in making a strongly presumptive diagnosis of Bright's Disease, and in urging repeated urinalysis should the first examination not confirm his opinion.

How common it is to find several members of the same family affected by chronic nephritis. I do not know, but I have seen two such instances. In 1901 a lady of about fifty, looking pale and haggard, consulted me on account of headache and vertigo. She hoped, she said, that glasses would relieve her, but was anxious because her brother suffered in the same way, and had died a few months later of Bright's Disease. There had been no examination made of her urine. Typical albuminuric retinitis was found in each

eye, although the vision was still good. A note to her physician led to further examination, and confirmed this diagnosis.

She died about six months later. In 1890 Dr. D., living in an adjacent town requested me to go to see his wife and examine her eyes, as she had albuminuria. He felt alarmed because a few years previously he had brought his daughter, a young lady between twenty and thirty, to have her eyes examined by an oculist. Bright's Disease was thus discovered, and terminated fatally a few months later. In the case of the doctor's wife there were no retinal changes, but, strange to say, about four months later the doctor himself consulted me in regard to changing his glasses. I found that he had typical albuminuric retinitis. This was in August. He died in the following February. In one of these families, therefore, a brother and sister died of Bright's Disease, and in the sister's case the diagnosis was first made with the ophthalmoscope; in the other both father and daughter died of Bright's Disease, and in both the disease was first diagnosed by changes in the retina, and the mother was said by her physician to be also the subject of Bright's Disease though she had no ocular complication.

The prognostic importance of albuminuric retinitis is great. Most cases die within eighteen (18) months, many much sooner. I have seen one case with chronic nephritis survive four years after the retina became inflamed.

In diabetes changes in the retina similar to that in Bright's Disease are common. The frequent association of albuminuria and glycosuria is to be remembered.

In heart disease the most important ophthalmoscopic change is embolism of the central artery of the retina. Retinal hemorrhages may occur in hypertrophy of the left side of the heart, where vascular degeneration attends it. Hemorrhages are also found in malignant endocarditis.

In anemia several intraocular diseases are found. In acute anemia from spontaneous loss of blood (rarely from traumatic) optic atrophy has been observed. In chlorosis of young girls optic neuritis occasionally occurs. In progressive pernicious anemia retinal hemorrhages are almost invariable.

In leucocythemia we find the retinal vessels remarkably pale and frequently hemorrhages and white spots in the retina.

In syphilis intraocular lesions may be of great value in establishing the diagnosis, but never with certainty unless corroborated by other symptoms. Certain inflammations of the choroid, retina and optic

nerve are very suggestive of syphilis. In inherited syphilis the most characteristic symptom is interstitial keratitis, but even in the absence of this patches of old choroiditis or a reddish atrophy of the optic nerve point very strongly to syphilis as their cause.

I close these notes with the words of Loring: "In the whole history of medicine there is no more beautiful episode than the invention of the ophthalmoscope, and physiology has few greater triumphs. With it, it is like walking into Nature's laboratory and 'seeing the Infinite in action.' While oftentimes through its agency also we get the first intimation of disease in remote and seemingly unconnected organs so as to read as if in a book the 'written troubles of the brain,' the heart, the spleen, the kidneys and the spine."

THE TREATMENT OF CHRONIC CONSTIPATION.

BY HUBERT RICHARDSON, M.D.

Late Pathologist to Mount Hope Retreat, Pathologist to Maryland Asylum and Training School for Feeble-minded Children; Demonstrator of Chemistry, University of Maryland.

There is perhaps no disease the treatment of which gives the general practitioner more trouble than chronic constipation, nor one which causes more disagreeable symptoms to the patient, the tired feeling, the want of energy, the headache, the loss of appetite and the general malaise often producing a condition of chronic invalidism, which, if long continued, becomes incurable. The purgative habit is the natural sequence to the condition, and it is by no means uncommon to meet a patient whose bowels never move without having recourse to an evacuant.

The causes of chronic constipation are many, one of the most common being hyperchlorhydria of the stomach which may not be very marked on quantitative analysis of the contents after a test meal, but yet sufficient to produce a chronic constipation; and here I wish to say the Ewald breakfast alone is in my opinion of little value as a means of testing the condition of the stomach. Three ounces of bread and a cup of tea can not be capable of producing a secretion such as would take place after a full meal of meat and bread, and many of the failures in the diagnosis of stomach troubles and the disrepute into which the analysis of stomach contents has fallen are, in my opinion, largely due to the use of the Ewald test meal alone. I invariably use the Salzer Ewald meals, believing the regular diet is more likely to

give the actual secretion of the stomach than such an apology for a meal as the Ewald breakfast alone ; further, it is absolutely necessary to make a quantitative estimation of the acid of the contents, the qualitative tests for the presence or absence of HCL are often worse than useless, being misleading. I use Topfer's method, and though open to many objections as an exact quantitative method, its simplicity recommends it, while it gives results sufficiently accurate for clinical work.

In my experience the normal free HCL after the Salzer Ewald meal is much lower than is usually given in the text book. I consider about 25° free HCL (Simon says 40° to 60°), 10° loosely combined HCL and 10° to 15° organic acids and acid salts as about normal in this state.

As one of the main functions of the small intestine is to secrete sodium bicarbonate it is evident that any increase in the amount of HCL or deficiency in the amount of soda will produce a lessened alkalinity or a positive acidity of the contents of the bowel which produces constipation.

In cases where there is a hyperchlorhydria there is generally a period of constipation followed by a more or less severe diarrhea with colicky pains.

That the bile, and especially the bile salts, have an effect upon the peristalsis has long been recognized, as the bile salts are reabsorbed from the intestine to be used over again by the liver, it follows that any severe attack of diarrhea, by not giving the bile salts time to reabsorb, will reduce the quantity in the system, and therefore reduce the quantity and efficacy of the bile as a normal evacuant. With the habitual use of the purgative this condition must be accentuated, causing the well known result that purgatives increase the constipation habit.

The treatments for chronic constipation are usually palliative rather than curative ; diets are theoretically of great value, and in some cases are effective, but it is much easier for a doctor to prescribe a diet than for him to make the patient keep to the required regimen. Many apparently insignificant details are effective in certain cases ; a strong douche of cold water to the abdomen or an ether spray, a glass of cold water on rising preferable, with a little common salt or soda bicarbonate, more especially in hyperchlorhydria, brown bread, cooked or uncooked fruit, green vegetables, etc., are often successful for a time at least, but in my experience sooner or later the patient neglects these precautions, and appears at the office with the same tale of woe.

In women who have borne children, and who give the history of having previously been regular, small doses of thyroid will sometimes give regularity. The reason for this is not very evident, but I was led to try it from attending a five-year old cretinic child whose bowels never moved without an enema. After the administration of the thyroid one of the first symptoms of improvement was a regularity of the bowels. Arguing that as pregnancy often effects the thyroid secretion, and that the constipation was apparently the result of the pregnancy, no other cause being evident, I prescribed thyroid with very satisfactory results, the patient being able to do without the drug after a few weeks of treatment. These cases are no doubt exceptional.

In considering the physiology of evacuation of the bowels, it occurred to me that possibly a diminished quantity of bile might be a cause of chronic constipation, and in any case an extra quantity of bile might act as a sufficient stimulus to keep the bowels regular. I therefore prescribed five grains of glycocholate of soda mass, with magnesium oxide q. s., as an excrepient, t. i. d., ordering the patient to take them regularly using a purgative when necessary as before; after taking the capsules for a week the patient reported that her bowels were moving regularly without using any purgative. I have had the same gratifying results in several other cases; and, further, the bowels remain regular after the discontinuance of the drug. Should a tendency to constipation return a few capsules will restore regularity.

One advantage in the use of glycocholate of soda is that it is not toxic, and is the natural evacuant of the bowel. The vegetable purgatives and calomel act as purgatives through their toxicity, and though salts are non-toxic they deplete the system, and are, therefore, often contraindicated. Glycocholate of soda mass is not a purgative, and results can only be expected after a trial of one or two weeks.

Occasionally, the patient, on commencing the treatment, complains of nausea. This usually disappears after a day or two if the medicine is persevered with, and can be avoided by taking the capsule two hours after meals when the stomach is emptying itself rapidly.

Sodium glycocholate mass is also of great benefit in malaria, and in other diseases where the liver has become inactive, and the complexion become of a dirty icteroid hue. On the administration of the drug for a few weeks the skin clears up, and the liver regains its normal activity.

THE LAWS OF HERIDITY.

MAURICE BELL, M.D.

One of the most familiar facts in Nature is that like produces like. Rose bushes are never propagated from fig trees. Human beings produce human beings, and nothing else produces them or can be produced by them. This establishes the law of heredity. In its strict application the law means the transmission of special qualities. In this sense it does not mean alone that black parents will produce black children or white parents white children. It means, in the most restricted sense, that special qualities in the parents will be represented in the children by tendencies to the development of those qualities. It is very difficult to draw the line between broad and restricted tendencies thus transmissible and transmitted. But the fact that broad characteristics, both physical and mental, are transmitted, to our certain knowledge, creates the presumption that a child will be born with a tendency to develop any strength or weakness that one or both of its parents may possess.

This tendency appears in the most unexpected forms. Thus a generation or two may be skipped, when a child will be born with the characteristics of a grandparent or a remote ancestor. This means that the peculiar characteristic handed down has lain dormant in the child's parents or other progenitors. Then, for closer notice, take an ailing, peevish mother, and you will see she will give birth to a child with the same disposition. For this reason mothers should be in good health before giving birth to children. A farmer, in selecting plants from which to save seed, never makes the mistake of choosing indiscriminately, but always selects the largest, finest and strongest. Hence, we are compelled to believe that the strongest and finest parents will produce the healthiest children.

I believe that the mother has a greater power in the transmission of qualities than the father. The reason for this is the child is a part of the mother's body during the whole nine months of gestation, and as such part it receives the nourishment which she chooses for herself; has the same blood in its veins that flows in hers, and is subject to all the nervous conditions that affect her.

It being an evident fact heredity plays a vital part in the character of the child, let us inquire what its manifestations may be. Physical qualities are transmitted; blond parents have fair children, and, as a rule, large parents have large children, or children who grow to be

large and healthy. People who live natural, intelligent lives are likely to be healthy, no matter what weakness they may have inherited, for the reason that Nature's efforts are always bent to correct errors and produce a higher type of life. A good deal of bad living is required to overcome this natural tendency, but many people live a good deal worse than they think. While size, as spoken of above, is an element of the ordinary struggles of life, strength is a greater one. By strength is meant not only good muscle and bone, but that deeper strength which is founded on the ability to resist the evil influence of conditions which militate against strength. If one takes cold easily he is not strong. Men of apparently splendid development are seen to succumb under conditions which seemingly much weaker men resist. This is true also of women. Hence, by strength is meant vital energy. Often we see so powerful a vital force that it holds death at bay for hours or days longer than a weaker person could possibly live. It is not merely a question of will power—it is one principally of vital energy—that which is born in us, and which we, in turn, may transmit. This abundance of vital energy is one of the most useful qualities that it is possible for us to possess. If we have the inherent power to resist death and keep it at bay, we have the power to resist disease. And by living aright we can inculcate within ourselves the natural power to resist disease, and by cultivating it in ourselves we can transmit the tendency to others. If we violate natural laws, knowing our act to be a violation, we transmit to our children a tendency to do likewise.

Much of the suicide among children, and especially girls, is due to the fact that their mothers practiced methods to evade maternity. Abortion is the deliberate taking of human life, and its practice tends to the transmission of a disregard for the sacredness of human life. As a sound mind usually goes with a sound body, it is essential that we cultivate sound bodies if we desire to bear children with sound, level, competent minds. There is still another phase of the subject, and that is the transmission of moral qualities.

It must be evident to all thinking persons that immoral habits of thought and conduct produce a like tendency in offspring. It is much easier for the morals to go wrong if the body and mind are weakened by disease, and if they go wrong in us we may expect them to do likewise in our children. There are deformities of mind and morals as well as of the body, and they are much more easily transmitted. If we try to do right and to think right our children will inherit the tendency to strive for the same ends.

Every one of us stands between two extremities—the past and the future. In each of us is implanted the natural tendency to be better than our progenitors. It is our duty to recognize this tendency ; to cultivate it ; to make the utmost of it. In ourselves, in the short space of time allotted to us, we can begin a tendency which will turn aside all the evil tendencies which we have inherited, and in so doing we can be starting a new line of good tendencies stretching throughout the eternity before us.

Our lives are not for a day, not for the few poor years allotted to us. The influence of each stretches forward forever.

MONTEREY, KY.

**Progress of
Medical and Surgical Science.**

THE BORDERLAND OF CONSUMPTION.

Paper presented by Dr. Paul Paquin, of Asheville, N. C., before the Ohio Valley Medical Association, Nov. 9-10, Evansville, Ind. :

In this paper of some length Dr. Paquin said :

Tuberculosis is still the most widely scattered, the most prevalent, and the one perpetual plague universally. It still consigns to the tomb more people than the slaughter of war in all its atrocious forms. The death roll of all the wars of the nineteenth century is estimated at 14,000,000 (Richet), and that of consumption in the same period and countries at 30,000,000.

Our country's yearly death rate by it is approximated at 160,000. Of these invalids perhaps one-fifth are not wage-earners and have incomes continuing while sick. The remaining four-fifths lose their previous daily revenue. If we estimate that all of the latter are too ill to earn anything for one year, and that each of them was previously earning one dollar a day three hundred days a year, what does it represent in yearly loss? \$38,400,000! If the average length of invalidism is two years it means a loss of \$76,800,000 a year. These are flat losses of income.

Why is the world so strangely apathetic with regard to this, the very gravest and most comprehensively destructive of all the ills of mankind? First, because the majority of the medical profession continues to consider tuberculosis, particularly pulmonary consumption, as incurable in any event. Second, because this circumstance and the lack of instruction in sanitary science in our system of education has produced a public mental attitude of wanton optimism. Third, because there remain here and there a few who reject facts of infection mathematically the world over, and continue a public crusade in favor of their mistaken ideas. Fourth, because when tuberculosis is recognized the truth is often concealed so long from the patient and relatives that the former loses precious chances of recovery, and is allowed to disseminate the disease broadcast. Fifth, because by the marriage of consumptives, prolific new centers of infection with far-reaching fatal influences reinforce the popular idea of unavoidable

pathogenic perpetuity. Sixth, because the diagnosis of the disease, in the great majority of cases, is made too late for any measure of prevention or cure to be effective.

Yet, according to Dr. Paquin, tuberculosis is proven largely curable by the experience of specialists, general practitioners and experimentalists. How are we to remedy the situation, cure many cases and finally stamp out the disease? On this question he suggests a more complete medical education so that early diagnosis may be possible.

The medical college that will establish a competent chair to teach the pathology and clinical factors of the borderland of disease will confer a blessing on the profession and humanity, for it will do immediate good and soon be emulated. This sphere of medical science, including physiologic conditions as they taper down and change to pathologic states, and which have been explored only by few, contains the very germ of knowledge for the early diagnosis affecting the constitution, and could be treated in a most interesting manner without in any way interfering, but rather supporting or supplementing the regular course on the principles and practice of medicine. A dozen or two of good, practical lectures would be of immense advantage to students and physicians alike.

The author argues that tuberculosis is, after all, a disease of nutrition due to a faulty nervous system which permits, directly and indirectly, the introduction and development of germs and their toxins in the system and claims that, under a complete and proper control and guidance of all the organs in the system, consumption could not occur.

Dr. Paquin, following other writers and practitioners, believes that the tonsils and other tissues of the neighborhood constitute the chief gateway of the tubercle bacilli, and mentions tonsilitis, habitual nose bleed, chronic hacking coughs, pleurisies, deficient nutritious and dyspepsias, etc., as early symptoms of consumption in the borderland.

Dr. Paquin lays great stress on the necessity of diagnosing the borderland of tuberculosis in order to arrest the malady in its incipency, on the usefulness of open air life in a suitable climate, the value of certain remedies in the line of natural law as certain vaccines and and serums when applicable and in select suitable cases, and deprecates the pitiful habit of sending consumptives away moribund, often without any prior arrangement with a physician where they are sent to care for them, save them from errors of conduct and treatment in a new climate and the pitfalls incident to new, strange surroundings.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

F. W. SAMUEL, A. M., M. D., A. D. WILLMOTH, M. D., Editors.
S. B. HAYS, M. D., Manager.

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

Is it always advisable to withhold treatment in syphilis until the appearance of the eruption?

Syphilis, one of the greatest plagues that affect modern humanity, is now regarded as a curable disease. Owing to its wide prevalence, and the dangers to the personal health and life of the individual affected, syphilis constitutes a serious menace to the public health.

Now, as syphilis is exceedingly prolific in its sources and modes of contagion, and as its contagious activity and transmissive power persists during a prolonged period, thus favoring its spread, do we always exercise good judgment in waiting for the eruption before taking positive steps toward combating the disease?

Absolute proof of the curability of syphilis is furnished by the fact that an individual may have a second attack of the disease, showing that he has recovered from the first.

It is an accepted fact that in any acute infectious disease, the sooner bactericidal measures are instituted, the amount of toxins that are absorbed are materially diminished, and the lesions that follow are lessened.

Since mercury and iodide of potash are regarded as specifics,

because they cause to disappear the organic as well as the functional disorders created by the syphilitic virus, is it not our duty to administer these drugs in large doses as soon as a typical chancre presents itself. Do we not shorten the contagious period of the disease, shorten the period of treatment necessary for a cure, and are we not less apt to have tertiary lesions, and do we not avoid the gummatous and sclerotic state, and do we not prevent the most dreaded of all, lesions of the nervous system?

Rarely is it necessary to withhold treatment in syphilis until the secondary stage manifests itself in the form of an eruption, for if we do not have a typical hard, indurated chancre as our primary lesion, it is only a few weeks at least until we have an induration of the (so-called pleiales) lymphatic glands of the inguinal region, small, hard and non-inflammatory. As the virus is only temporarily checked by these little glands and their ferments, a general induration of the glands of the entire lymphatic system soon follows. Just here, at least, the virus should be checked, because the blood and every secretion of the patient is infectious, and now we are positive, or ought to be, that we are dealing with syphilis.

It is possible for other conditions to confuse, but when in doubt give syphilitic treatment, and continue it.

We have all been taught to dread the awful mistake of causing a patient to take mercury for two, three or four years when he merely had a chancreoid and would have been well in a few weeks, and think of the mental anxiety of the patient if told that he has syphilis. By beginning with mercury as soon as a typical sore is observed, and to carefully push it until we find the tolerant dose for the patient, we can do no greater harm than to insure a nearer perfect glandular stimulation with an evacuation of the bowel daily.

It is to be admitted that it would be hard to impress some people with the importance of keeping up their treatment; the same person would not continue his treatment for three years if he did see the eruption.

Do we not entirely overbalance any argument that might be offered by the advocates of the waiting method, when we by early treatment entirely extinguish the transmissive capacity of the individual when we prevent the inhibitory influence upon the productiveness of the family, avoid the destruction of the product of conception and allow normal development to result?

Is it not some argument in favor of early treatment to prevent social damage by the appearance of the eruption, and every syphilitic individual is a source of possible damage to every person with whom he comes in contact? One case of syphilis in a family may be the cause of many innocent infections. By beginning early with mercury do we not materially limit this infectious period.

E. S. A.

Book Reviews.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By George Whitfield Overall, A.B., M.D., formerly Professor of Physiology in the Memphis Hospital Medical College. Chicago: Rowe Publishing Company, 1903.

Overall's "Non-Surgical Treatment of Diseases of the Prostate" is an excellent treatise, comprising well written excerpts from the author's knowledge of this gland and the substance of several original articles by eminent men in several of the leading medical journals. Dr. Overall is a man of much experience and knows there is much available and effective treatment that is not surgical. The book, therefore, embodies his views, results, methods, etc., and may be found of material aid in the treatment of prostatic affections.

Visiting and Pocket Reference Book for 1895. The following is a comprehensive contents: Table of Signs and How to Keep Visiting Accounts, Obstetrical Memoranda, Clinical Emergencies, Poisons and Antidotes, Dose Table, Blank Leaves for Weekly Visiting List, Memorandum, Nurses Addresses, Clinical, Obstetrical, Birth, Death and Vaccination Records, Bills Rendered, Cash Received, Articles Loaned, Money Loaned, Miscellaneous, Calendar 1905, 126 pages, Lapel Binding, Red Edges. This Very Complete Call Book will be furnished by the Dios Chemical Company of St. Louis, Mo., on receipt of 10 cents for postage.

The above describes this pocket list. It may be well to add that any physician having twenty-five patients or less per week will find this to subserve his purpose.

The Man Who Pleases and the Woman Who Charms. By John A. Cone. "Look out lovingly upon the world and the work will look lovingly in upon you." Third Edition. Revised. Price, 75 cents, postpaid. New York: Hinds & Noble, Publishers, 1904.

The above is an interesting volume of 131 pages, a collection of expressive and impressive sayings of the best authors and writers, all dovetailed with the author's elaboration, to enumerate the qualities that render the man pleasing and the woman charming. Much can be gathered from this book to suggest the secret of one's personality, and when 'tis said, "He won't do," and "She just doesn't appeal," this volume, though small, may solve the mystery.

The Medical Record Visiting List, or Physician's Diary for 1905. New Revised Edition. New York: Wm. Woods & Co., 1905.

We are in receipt of the Medical Record Visiting List for 1905, find

it a very valuable one, and convenient for the pocket. Its obstetric calendar is exceptionally of use in that we can compute, of course not with accuracy even, from the fetal movements. The contents have been increased, and much valuable information is to be found, as well as an excellent account book.

BOOKS RECEIVED.

Hare's Practical Therapeutics. A Text Book of Practical Therapeutics ; With Especial Reference to the Application of Remedial Measures to Disease and Their Employment upon a Rational Basis By Hobart Armory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin and Barton C. Hirst. New (10th) edition, much enlarged, thoroughly revised and largely rewritten. Octavo, 908 pages, with 113 engravings and four full-page colored plates. Cloth, \$4.00, net; leather, \$5.00, net; half morocco, \$5.50, net. Philadelphia and New York: Lea Brothers & Co., Publishers, 1904.

Qualitative Analysis Brief. By Allard Memminger, M.D., Professor of Chemistry, Hygiene and Clinical Urinary Diagnosis in the Medical College of the State of South Carolina; of General and Applied Chemistry in the College of Pharmacy of South Carolina, and Member of State, National and International Medical, Pharmacal and Scientific Societies, Active and Honorary, etc., etc. Second Revised Edition and Rewritten. Philadelphia: P. Blakiston's Sons & Co., 1904.

Blakiston's Quiz Compend. Medical Latin. Designed Expressly for Elementary Training for Medical Students. By W. T. St. Clair, A.M., Professor of the Latin Language and Literature in the Male High School, Louisville, Ky.; author of "Cæsar for Beginners," "Notes to Cæsar's Gallic War, Book Three," etc. Second Edition. Revised. Philadelphia: P. Blakiston's Sons & Co., 1904.

A General Catalogue of Medical Books, comprising a list of both Authors and Texts of all Medical Publications. Price, 25 cents. Philadelphia: P. Blakiston's Sons & Co., 1904.

The Surgical Treatment of Bright's Disease. By George M. Edebohls, A.M., M.D., LL.D., Professor of the Diseases of Women in the New York Post Graduate Medical School and Hospital; Consulting Surgeon to St. Francis Hospital, New York; consulting Gynecologist to St. John's Riverside Hospital, Yonkers, N. Y., and to the Nyack Hospital, Nyack, N. Y.; Fellow of the New York Academy of Medicine and to the American Gynecological Society; Honorary Fellow of the Surgical Society of Bucarest; Permanent Member of the Medical Society of the State of New York, etc. New York: Frank F. Lisiecki, Publisher, 1904.

Society Proceedings.**PROCEEDINGS OF THE LOUISVILLE CLINICAL SOCIETY,
OCTOBER 25, 1904—EXHIBITION OF PATHO-
LOGICAL SPECIMENS.**

Dr. Samuel: Gentlemen, I report this fibroid simply because it has, to me, several features that are interesting. The patient was a woman forty-two years of age. The tumor had a history of existing six years. There had never been any symptoms, such as uterine hemorrhage, to indicate the tumor. It was noticed six years ago in the lower part of the abdomen, presenting on the left side. It grew to this size. An interesting feature was that it was impossible for me to make a diagnosis of the case on account of certain conditions.

During the past eighteen months she had lost flesh rapidly. A marked feature about the case was the characteristic facies ovariana. She was a delicate looking woman; had a great deal of determination, however; excellent heart and kidneys, though her doctor in attendance in the country tells me that she had a year ago an attack of acute nephritis, with casts and albumen in the urine. Urinalysis before the operation showed the kidney to be healthy so far as the urine was concerned.

This tumor entirely filled the woman's abdomen, and reached to the diaphragm. As you see it is an entirely extra uterine growth. There is one feature that I would like to call attention to, you will see on one side where the tumor was cut off. I have never seen a fibroid grow to such size as that. There is no reason why it should not. The smaller end of the tumor was entirely out of the pelvis, in the lower part of the abdomen. I could make a vaginal examination with difficulty because this woman was a spinster, the hymen intact, and by causing her considerable pain and using a good deal of force, the neck of the uterus could be touched. I could not tell whether it was connected with the uterus, nor could I tell whether there was any fluid present or not. From the loss of flesh and from her face I thought it was an ovarian tumor. After opening the abdomen I introduced a needle to determine whether the growth was cystic or not. Finding no fluid, I enlarged the incision and turned out this tumor eight inches in length. It was difficult to turn it around and make the tumor present. With the hand above the tumor and pushing it up under the liver, I was able to deliver it. The bowels could not be seen; they

were in the pelvis and in the kidney spaces in the posterior portion of the abdomen. After cutting off the tumor and securing the pedicle, I removed two or three smaller growths from the fundus of the uterus and the neck. There was not a single adhesion in this case if I remember correctly. Those are about all of the features of interest, save that it was a sub-peritoneal growth that had grown to enormous size. I never saw a tumor fill the abdomen so completely as this tumor did—that is, taking up every part of the space.

One interesting feature about this case was the development of the venous supply in the broad ligaments. There was a small amount of ascites in the abdomen, not over four or five ounces, but the venous plexus in the broad ligament was developed to an enormous size. I think it was due to pressure. The woman sought relief because she was having a great deal of distress and pain. She could not eat a meal without a great deal of distress and pain. These veins on either side were the largest I have ever seen. This plexus is known as the pampiniform plexus.

Dr. Leavell: I have nothing to say except that it is remarkable that there should be no adhesions.

Dr. Satterwhite: This is a typical fibroid; there is no malignancy about that. It reminds me of a case I had a number of years ago. This tumor was solid and firm, and it was intra-uterine. It was about the size of a child's head. It was just emerging from the os, and I seized it with a wire and separated it; after I had done this I could not get it out of the vagina, and I had to get forceps and deliver it with instruments, and in delivering it with forceps I tore the woman's perineum.

Soon after that I assisted Dr. George Griffiths in removing a similar fibroid. The doctor's case was the wife of a druggist; she had gotten down, very low in health, and she immediately picked up and is living to-day and is a healthy looking woman.

Dr. Weidner: I want to show a pathological specimen. I want to show this tube which was inoculated six days ago. The blood serum on which it is grown is rather dry, and the specimen is grown from the throat of a child that presented symptoms of real diphtheria. The culture has shown nothing but the staphylococcus pyogenus aureus. The culture is pure. The reason I wish to show it is to bring out Dr. Allen's report on the city.

I have had three cases, and two of them presented symptoms which made me uncertain as to whether they were cases of true diphtheria or

tonsillitis. An examination of both of them showed nothing of diphtheria. I must confess that in one case I would have been very much in doubt but for this examination here. I would like to hear from Dr. Allen whether we have much diphtheria in the city now or not.

These cases have all done well, and still they were characteristic but for this one feature. There was a great deal of glandular swelling, rapid pulse, bad heart action and great prostration, more than we ordinarily see in tonsillitis.

Locally, these cases were treated with nitrate of silver solution and Loeffler's solution. I did not consider them cases of diphtheria.

Dr. Cheatham: How long has that been? Has there been any paralysis following? Did you make any injections?

Dr. Weidner: The cases have only been running six days. I did not make any injections.

Dr. Cheatham: What is the condition of the throats of the children at the present time?

Dr. Weidner: The tonsils are still enlarged and reddened, the throat is clear of membrane, and there is no fever, and the children show apparent well being.

Dr. Cheatham: I have not seen much diphtheria lately. I saw a case at the college Saturday a week ago. I wanted to inject antitoxin. The family called in another doctor, and he pronounced the case not diphtheria, and he did not inject that day. The doctor, however, sent to the City Hospital the next day for some antitoxin. It had developed in the right nostril; the child's nose had been bleeding, and the temperature was slightly elevated. The tonsil was not involved at all. When we attempted to remove the membrane it was followed by copious bleeding. I was going to give the child the benefit of the doubt and give it the antitoxin. It was early, the child had been sick only a day or two. It must have involved the tonsil later, because the doctor sent and got the antitoxin and made an injection.

We see many cases of paralysis of the throat and eye that follow cases treated simply as follicular tonsillitis. Some of the worst cases of paralysis that I have ever seen were where the membranes were exceedingly small, apparently simply a case of follicular tonsillitis. I have seen other cases where the membrane covered the tonsils, fauces, the nasal mucous membrane and the larynx, and no paralysis followed. I do not think the amount of deposit means much so far the secondary symptoms are concerned.

The membrane the doctor mentions looks a little suspicious. Still, we have membranous tonsilitis that is not diphtheria. His examinations made that plain.

Dr. Allen: Dr. Weidner, I am under the impression that you have three cases of diphtheria, and I think that you are derelict in your duty in that you did not report them as such and have cards placed on the houses. I do not mean to criticize your manner of investigation, but the laboratory of the Health Department is open to the physicians of the city at all times, and will determine positively whether or not you have a case of diphtheria. We could make the examinations sooner than Dr. Weidner did, and we would be glad to assist him in any way we could. I believe he has three cases of diphtheria.

Dr. Satterwhite: I would say that we all know that we may have diphtheria with hardly any deposit; in fact, it has been my experience that the less the deposit the more frequently the constitutional subsequent effects of diphtheria are manifested. Dr. Cheatham will remember the case of a little boy several years ago who was not sick at all, and I could not convince the family until after Dr. Cheatham's examination of the case that it was a suspicious case when I wanted the rest of the children to be kept out of the room. The boy got up and went to school. His mother brought him to my office and said his eyesight was failing, and I suggested to send him to Dr. Cheatham, and the doctor told me that he had paralysis of the muscles of the eye, and the paralysis explained the trouble.

Now I always feel anxious about any case that has any deposit in the fauces, or on the tonsils or anywhere, and I think as Dr. Weidner has done an examination should be made in every case.

I am very glad to hear that Dr. Allen will make those examinations of the cases that are not able to be referred to Dr. Weidner, and I will profit by that in the future.

In all catarrhs of the throat we have a membrane that resembles that of diphtheria, and in catarrhs of the nose we have a membrane that resembles diphtheria very much.

Dr. Leavell: These cases, of course, are interesting to all of us, both general practitioners and specialists. I do not believe we should ever wait in these cases for a microscopic examination. I think we ought, in any suspicious case, to use the antitoxin. It does not seem to make any difference where the deposit is. The deposit on the tonsil is less likely to produce systemic infection, and less likely to cause death; but the fact is that we never know to what extent and how

much systemic effect we are going to have; we never know when paralysis are going to develop. I believe the antitoxine prevents the development of any paralytic condition in many cases.

We do not have a high temperature in diphtheria alone. If we have high fever and prostration accompanying it, we have mixed infection along with the Klebs-Loeffler bacillus.

Dr. Willmoth: I would like to ask one question for information, that is, if it is as common not to find the diphtheria bacillus in diphtheria as it is not to find the tubercle bacillus in tuberculosis? We have typical cases of tuberculosis, and later on they die, and we are never able to find the tubercle bacillus. Is it possible to have a case of diphtheria, and later on the paralysis, and yet never be able to find the diphtheria bacillus?

Dr. Weidner (closing): Not having followed what was going on, I do not know how much of this trouble there is in town. When school commences this trouble begins. That has been my experience for years. Of these cases, two of them are suspicious on account of the symptoms, although they are not typical. I will relate in this connection what I think is typical of diphtheria. I recognize that the fever is less in pure diphtheria than in mixed infection. The size of the membrane counts for nothing. It may be very small and still may spread; the spreading counts a great deal; when it spreads from one tonsil to the other you can be sure that you have a case of diphtheria; then the deep red margin around the membrane in real diphtheria, with a good deal of swelling of the adjacent lymphatic glands. These are the most important signs that I consider in the question of differentiation. The pulse may be very rapid in either case, and we may have a toxic condition in either case. In diphtheria the pulse is affected more than in tonsillitis; the debility is marked later on.

In two of the cases there had been cases of sore throat in the neighborhood. They had not been reported as diphtheria, and I was not going to report these cases as diphtheria when I had my doubts as to whether or not it was diphtheria. As to the question of fault in the technique, if the examinations had been made in the laboratory of the Health Department nothing else would have been found. I do this work regularly, and take pleasure in making these examinations myself, and I do not have to rely on the Health Officer, and do not want to bother him.

As to the question of not finding the bacillus that the doctor raises, we may not find the bacillus because we have used the ——— fluid

———, and we may not find the bacillus because of faulty technique.

I believe that in all cases of tuberculosis of the lungs or the air passages where there is breaking down, we ought to find the tubercle bacillus. I would not make a diagnosis without finding the bacillus. I would simply suspect tuberculosis even if there were a cavity. Whenever I find a purulent sputum I expect to find the tubercle bacillus. When I do not find it I think it is another infection. It may be that the sputum is not gathered right. It should be taken in the early morning. I do not think the examination of a single slide is sufficient. Another mistake is that we do not sediment the sputum. Use the sediment method when you do not find it. Take the sputum and throw it down with the centrifuge and examine the sediment.

Dr. Dabney presented a paper "The Ophthalmoscope in Diagnosis," under original articles, page 673, this issue.

DISCUSSION OF DR. DABNEY'S PAPER.

Dr. Wm. Cheatham: Dr. Dabney has covered the field so well that I can find little to say. As to the use of the ophthalmoscope in the diagnosis of brain tumor, I have seen a good many cases in my experience in diseases of the eye. Like other diseases, they seem to go in groups; we may see four or five cases in a short time, and then may not see another case for many years. Take the case of papillitis that the doctor spoke of, headache is another symptom that we get in tumor of the brain that assists us in making a diagnosis. The headaches are somewhat characteristic; they are often severe for a few days; quiet down for a few days and begin again, the growth remaining quiescent for several weeks or months, and then spreads, making more pressure, and we have more headache. This symptom of headache, with the curious form of vomiting without nausea, assists the ophthalmoscope at times in making a diagnosis.

In practice I have seen several cases, and I reported a case probably six months or a year ago that had typical retinitis without any albumen in the urine. Judge R. had been under treatment of Dr. ———, of New York, for some disease, and I found that he had an albuminuric retinitis. He lived a few months afterwards. This condition shows in the eye before in any other part of the body because the vessels are terminal vessels having no collateral circulation, and that is the reason for these changes occurring in the eye before in any other part of the body.

We did not mention some changes we see in the lens in cataract

from diabetes; frequently the diagnosis is made with the ophthalmoscope. He paid no attention to diseases of the anterior part of the eye.

Dr. Weidner: Like Dr. Cheatham, I have little to add to the excellent paper. Dr. Dabney has given us a beautiful resume of the use of the ophthalmoscope. I would only like to say a word about retinitis albuminurica. I understand that there are some cases of nephritis that give amaurosis without showing us anything about the eye. An ophthalmoscopic examination of the retina shows nothing at all. It is only to be explained by the toxic condition of the nerve centers. — — — mentions that in 3½ per cent. we find these changes in the arteries, hemorrhages and white streaks. He calls them — — —, depending upon the vascular changes in the arteria centralis retina. The changes in the vessels consist of changes in both the arteries and the veins. Edema, loosening of the retina to some extent, and hemorrhages are mentioned by some authors. We can explain this because we look upon Bright's Disease, particularly interstitial nephritis, as a disease that affects all of the blood vessels all over the body, and these changes can be seen by the ophthalmoscope, giving a beautiful illustration of its value.

I differ with Dr. Cheatham in my own experience. I fully admit that we have cases where the ophthalmoscope will reveal changes before anything else I have never seen a case of that sort in my own experience. We may not find albumen, but the urine will exhibit other changes in the uric acid, urea and casts of some kind.

Most cases terminate fatally soon after discovered; I agree with him on that point. In the case of Dr. Stewart he lived about half a year, but the urine showed the condition long before that.

I am much interested in this question, and would be glad to see the urine of such cases.

Dr. Marshall: I enjoyed the essay very much, and I shall not attempt to speak of it at any length. I would like to ask on the point that Dr. Dabney calls attention to about the vessels of the eye and brain not being in sympathy. I have always understood that such was the case, and have thought that by the assistance of the ophthalmoscope we could discover troubles in the brain.

Dr. Leavell: We all enjoyed Dr. Dabney's paper very much. It demonstrated the fact that the eye is not only the "window of the soul," but of the body to a great extent. The value of the ophthalmoscope to the general practitioner through the specialist is certainly very great, and during my association with Dr. Dabney for the past

ten years it has been my desire to develop the use of the ophthalmoscope to a greater extent than I have, knowing that it is a useful diagnostic instrument. As to the instrument in the hands of the general practitioner, it is not of very much value because we do not see enough cases to demonstrate its use.

Dr. Morris: I know practically nothing of the actual use of the ophthalmoscope, but I have been exceedingly interested and instructed also by the essay in a general way, and I feel that we can all certainly agree that we have been benefited by the essay and by the discussion, especially by those who were able to discuss it in a scientific way, and I feel like thanking Dr. Dabney for his efforts in writing the essay.

Dr. Irwin: I can simply add my commendation to what you have already said. The essay is not only a practical one from every point of view, but it is beautifully written. I was particularly pleased with the prose in this essay. It is the finest piece of prose I have listened to for years. The ophthalmoscope is certainly a great means of discovering disease, but one point that Dr. Weidner raises, and that is the average duration of the disease until death ensues. I believe he stated it was from fifteen to eighteen months. The average duration given by medical men in very large collections of cases are usually that the duration of Bright's Disease is from nine to twenty-seven months, so that the discrepancy between the time it is discovered by the ophthalmoscope until death follows is not a settled point.

It is very frequently we discover, in making life insurance examinations, the first evidences of Bright's Disease. There are few business men who will consult a physician for a trivial illness, and all forms of this disease, unless acute, come about in an insidious way, and make serious changes before they come to our attention, so that it is hard to say how long they last. I have seen cases last for seventeen years giving all the evidences of the disease. — had ten cases of tubular nephritis in the city that lived eleven years.

Dr. Cheatham has given a good explanation of the disorders in the retina, and it is not all surprising that after changes have taken place the ophthalmoscope should render us valuable aid, the eye being a prolongation of the brain.

It is too much neglected by the general practitioner and physicians generally, not because they want to neglect it, but because it is not convenient to use the ophthalmoscope. We ought to take more time in those cases showing brain symptoms.

Dr. S. G. Dabney (closing): I am much obliged to the gentlemen

for their kindly discussion. In regard to Dr. Cheatham's statement of Bright's Disease occurring early in the retina I do not think that it is usually the case. I think, in the majority of cases, albumen and casts may have existed for a considerable time before being discovered. The cases in which albumen is not found and the symptoms of albuminuric retinitis present must certainly be unusual.

The great majority of these cases die in less than eighteen months. It was said in the average case of chronic nephritis it is from nine to twenty-seven months; that gives them a wide limit, of course, leaving an interval of eighteen months, but the majority of cases where the disease manifests itself in the eye die inside of a year. I did not see the one that the doctor said lived eleven years. I have seen one live five years.

I think in many cases where the diagnosis is doubtful between typhoid fever and meningitis it might be cleared up by looking at the interior of the eye. The examination does not take long, only a brief time; many can be examined without dilating the pupil. But in cases in which it is necessary to use a mydriatic the attending physician can put a drop of homatropine in the eye, and the specialist can examine it an hour afterwards and get satisfactory results.

It is curious to see that typical as albuminuric retinitis is, now and then the retinal disease that attends a brain tumor is very strikingly like that of albuminuria, and that must be borne in mind. It must be borne in mind also that albuminuria may exist with brain tumor.

I was somewhat in hopes that the general practitioners would speak on the point as to whether it is common to find Bright's Disease in more than one member of a family. I was struck by the fact that I had two families, in one of which two members died of albuminuria, and in the second family two have died and a third has the disease.

Dr. Allen: I think Dr. Weidner seems grieved at my criticism. It is not a professional criticism, but an official criticism. The fact of the matter is that I believe all cases of suspected diphtheria ought to be reported to the Health Department because of the fact that they should be placarded so that there may be no chances of disseminating the disease. I hope Dr. Weidner will feel that it is no professional criticism. I believe in a Society of this kind; we ought to talk of these matters freely, and I do not want him to feel aggrieved at anything I said. I think these cases should have been reported to the Health Office for the good of the community.

Dr. Weidner: I think that we all know that Dr. Allen has the

best of intentions. I think at times we are all liable to overstep the practical. I think it is wrong for us to report a case as diphtheria when we do not know that is diphtheria. Consider the consequences. There were three or four children going to school; if these cases had been reported as diphtheria the other children in the house would have been kept at home. I feel it my duty to take all the necessary precautions.

Take a business place—a grocery or a bakery—you can not afford to ruin a man's business. These cases have gotten all right. If I do not know it is diphtheria, what right have I to stop this man's business? I have tried to exclude diphtheria by the method of physical inspection upon which I rely more than anything else, and I think I have done my duty.

I do not think I should be asked to turn in a report of a case when I do not know that it is diphtheria.

Dr. Allen: Just a few words to illustrate one case. Within the last week there was a case on Madison street, reported on the 17th of this month. The card was mailed late in the afternoon. On the next morning, the 18th, the inspector went up and put up a card. There were two children sick with diphtheria, one having died a few moments before he arrived. The father came out and wanted to know what a card would do at that time. The child had been sick for five days and had just died and another one was sick, and why did he come at that time to put a card on his house.

He saw that the man was in trouble and did not discuss it with him. Now, the doctor had been attending these children for five days. One died and had died that morning, and he had reported the case the evening before. It puts the Health Department in an awkward position. The children go to the public schools from these infected houses, and this thing of waiting and delaying until you make an examination is a dangerous sort of procedure, and I say in suspected cases it ought to be reported to the Health Officer to protect the school children of the city.

Dr. J. W. Irwin: Over precaution is a dangerous thing. The Russians furnish a wonderful illustration of over precaution in taking some English fishing boats for Japanese torpedo boats, killing some men and sinking some boats.

If we placard a house where there is no diphtheria we are not doing right, and the Health Officer should allow a little latitude, and not want us to report cases of sore throat. If a child has a follicular

tonsillitis, and there are no manifestations of diphtheria, then I do not think we should report it. If in doubt, give the order the benefit of the doubt and report it.

DISCUSSION OF DR. SATTERWHITE'S CASE.

Dr. Irwin: Well, doctor, the case, to tell you the naked truth, remains in my mind as a mystery. There is something unreported in the case that might have thrown considerable light; the family history might have given some light; the habits of the father might have given more light. There might have been some brain infection there, possibly a meningitis, to say the least, it might have been a tumor or growth. The history given of the case is not sufficient to warrant an exact conclusion touching the case. It is a great pity that an autopsy was not held. Sudden deaths come from meningitis, lepto-meningitis and intra-ventricular pressure. Quinke has shown that sudden deaths are due to filling of the ventricles rapidly, especially in cases of basilar meningitis. In meningitis at the base of the brain sudden death may occur at any time.

Dr. Satterwhite (closing): So far as any specific trouble was concerned, we investigated that point thoroughly, and yet at the same time wanting to do something we put her upon mixed treatment and pushed it as rapidly as possible, but there was no amelioration of symptoms at all.

Correspondence.

FOURTH PAN-AMERICAN MEDICAL CONGRESS.

OCTOBER 25, 1904.

DEAR DOCTOR :

The Fourth Pan-American Medical Congress, which will convene in Panama the first week in January next, bids fair to be a most delightful midwinter trip. The delegates will leave this country by the Atlantic, Pacific and Gulf coasts the last week in December. They will return by the same routes, or will make round trips.

The Public Health Association meeting will take place on the following week in Havana, and those desirous of attending both meetings can arrange to do so.

There are two routes for the physicians to take from Panama to Havana. The first is by way of Jamaica to Santiago de Cuba by boat and overland by rail to Havana. The second is by water from Panama to Vera Cruz, and from there to Havana. The former will probably be the most pleasant trip.

From Havana the return trip can be made directly north to New York by water or via Miami or Tampa, Fla., or New Orleans. The connections and dates of sailing are now being arranged.

The Panamanian Government has appropriated \$25,000 for the scientific session and the entertainment. The Congress will be held from the second to the sixth of January. The afternoons will be devoted to the scientific sessions, and the mornings and evenings to trips and social functions. So far as can be learned, the programme in Panama will be a reception on the first day by President Amador, of the Panama Republic, and the formal opening session of the Congress the same evening. On the second day an excursion to the Canal in the morning, meeting of the various sections in the afternoon and a banquet in the evening; on the third day an excursion down the bay to Taboga Island, where a Panama breakfast will be served, scientific sessions in the afternoon and a ball in the evening. On the fourth day excursion to the United States army barracks in the morning, section meetings in the afternoon and the formal closing session in the evening. On the fifth day an excursion to the plantation of the United Fruit Company; and on the afternoon of this day those of the Congress who intend going to Cuba to attend the meeting of the Public Health Association

will sail for Jamaica, while those who intend going by way of Vera Cruz, or returning home by way of New Orleans or New York, will remain until the following Tuesday.

The Secretaries of the Sections of the Congress for the United States are :

Dr. A. H. Doty, of New York, Hygiene and Quarantine.

Dr. Judson Duland, of Philadelphia, Medicine.

Dr. R. Matas, of New Orleans, General Surgery.

Dr. Bert. Ellis, of Los Angeles, Eye.

Dr. Hudson Makuen, of Philadelphia, Throat.

Dr. Frederick Jack, of Boston, Ear.

Dr. C. H. Hughes, of St. Louis, Nervous Diseases.

Dr. Geo. Goodfellow, of San Francisco, Military Surgery.

Dr. John Riddon, of Chicago, Orthopedic Surgery.

Dr. D. W. Montgomery, of San Francisco, Dermatology.

Dr. C. G. Kerley, of New York, Pediatrics.

Dr. Noble P. Barnes, of Washington, Therapeutics.

Dr. Walter Chase, of Boston, Pathology.

Communications from physicians in the United States, interested in these branches, can be sent directly to these different Secretaries. Delegates intending to attend the Congress desirous of obtaining information concerning it, should communicate with the Secretary of the International Executive Committee in the United States.

DR. RAMON GUITERAS,

75 West Fifty-fifth street,

New York City.

SAN FRANCISCO, CAL., U. S. A., September 28, 1905.

Editor American Practitioner and News, Louisville, Ky.:

DEAR SIR—For the benefit of scientific research I wish to announce to you the result of my latest experiment, which lead me to the discovery and proof of the electrical action of the life principle in the living lungs.

On Thursday morning, September 22, 1904, I performed an experiment on the lungs of a living animal at the slaughter pens of Messrs. Clayberg & George, South San Francisco, Cal.

Tracheotomy was performed on a living sheep. Two especially prepared, small, platinum electrodes were inserted through the opening into the cavity of each lung; these platinum electrodes were attached by about thirty feet of insulated copper wire to a Weston galvanometer

The instant the electrodes reached the air chambers of the lungs, the needle of the galvanometer moved from zero point, alternately to the right and to the left, the full length of the animal. This action proves conclusively that there is an electrical current in the living lungs; also that the current alternates from positive to negative with perfect rhythm at each breath of the animal.

The introduction of oxygen into the lungs during inspiration accelerated the action of the needle, thereby showing that oxygen increases the electrical action taking place.

In this experiment I was assisted by Drs. H. W. Hunsaker and E. A. Lewis, also by Mr. E. H. Forst, an electrical expert, all of whom reside in this city. Numerous others witnessed the experiment, and all are willing to bear witness to the details herein described.

I am earnestly yours,

ALBERT J. ATKINS, M.D.,

Professor of Physiology, California Medical College; Professor of San Francisco County Medical Society of Physicians and Surgeons; Member of the Astronomical Society of the Pacific Coast, etc.

The American Public Health Association will hold its thirty-second annual meeting at Havana, Cuba, from July 9th to 13th inclusive, 1905. The United States, Canada, Mexico and Cuba compose the Association, and Dr. C. O. Probst, Columbus, Ohio, is Secretary.

Battle & Co., of St. Louis, Mo., have just issued the third of the series of twelve illustrations of the "Intestinal Parasites." They will send same free to physicians on application.

Wm. R. Warner & Co., the well known pharmaceutical firm of Philadelphia, have been awarded the Grand Prize, *i. e.*, the highest award given pharmaceutical preparations at the Louisiana Purchase Exposition.

A very interesting exhibit in the Liberal Arts Buildings, Group 23, Exhibit 16, is the Physiological Research Laboratories of Burroughs, Wellcome & Co., of London, E. C. Effect of drugs on the living organism is shown, as also antitoxic sera, blood specimens and other biological and chemical demonstrations of extreme interest.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

VOL. XXXVIII. LOUISVILLE, KY., DECEMBER 1, 1904. NO. 161.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally also a "downright" fact may be told in a plain way — and we want downright facts at present more than any thing else. — RUSSELL.

Original Articles.

THE CALIBER OF THE URETER—THE URETERAL ISTHMUSES, CONSTRICTIONS OR SPHINCTERS.

BY BYRON ROBINSON, B.S., M.D.

Modern surgery, the father of anatomy, has dignified the ureters into the most important of ducts. The ureter, a musculo-membranous duct, extends from the base of the renal pyramids to the external angle of the vesicle trigone. For convenience of description and topographic relations it may be divided into three segments, namely: the ureteral calices, the ureteral pelvis and the ureter proper. The ureter belongs to a perfect system of waterworks, whose mains (ureter and bladder) are always full.

In function and structure the ureter is an organ as distinct and independent as the segments of any other visceral system.

Lying on the dorsal wall of the cadaver, it is a flattened, white, membranous tube, due to intra-abdominal pressure. In the living it is a constantly changing cylinder, consisting of constrictions, isthmuses and fusiform dilatations. The ureter is not a uniform calibered tube, but consists of dilatations and constrictions.

Over 150 ureters of man and animal were distended by injections (air, solids or fluids) to determine the form and location of the ureteral constrictions, isthmuses and dilatations. From these experiments I shall divide the ureteral sphincters, constrictions or isthmuses into three, viz.: (a) proximal; (b) medial; (c) distal, and the ureteral

dilatations, reservoirs or spindles into three, viz.: (*a*) proximal, (*b*) middle, (*c*) distal.

Ureteral dilatations and constrictions are of extreme importance as regards surgical intervention, for the ureteral isthmuses are limited in caliber and wall, allowing limited material for surgical manipulations, while the ample wall and lumen of the ureteral dilatations allow a wide range of surgical intervention.

Historical—That the ureter is a non-uniform calibered tube has been known from anatomic records for over three centuries. However, two views prevailed as regards the irregular lumen of the ureter, one asserting that it is pathologic, the other claiming that it is anatomic, physiologic.

The following names and dates present views that the ureter, physiologically or anatomically, is non-uniform in caliber: N. Nuck, 1692; Kerking, 1729; Boerhave, 1743; Fanton, 1745; Haller, 1765; J. B. Morgagni, 1682-1771; Quincy's Lexicon, 1802; A. Fyfe, 1823; E. Huschke, 1844; H. Luschka, 1863; Quain, 1801; Testut, 1894; G. Schwalbe, 1896. The above list of anatomists covers 311 years, during which time it is recorded that the lumen of the ureter is anatomically uniform in caliber. In 1896 Professor G. Schwalbe wrote an excellent article on the ureter, stating that the lumen of the ureter is not uniform in caliber, but that the ureter of animals is uniform in caliber. My experiments have not only confirmed that the lumen of the ureter is non-uniform, but that animals also possess distinct spindles and constrictions in their ureters.

My view is at present that the irregular caliber of the ureter of man and animals is a heritage from the Wolffian body, but that the ureteral constrictions and dilatations are modified by environments, especially by the erect attitude. Microscopic examinations demonstrate that tubes of the Wolffian body (pronephros), Muller's duct, the oviduct (mesonephros), parovarium, verticle or Kobelt's tubules (metanephros), uriniferous tubules and ureter are all irregular in caliber. They possess constrictions and dilatations.

I. THE PROXIMAL URETERAL ISTHMUS, NECK, CONSTRICTION.

The proximal ureteral isthmus is the constrictions which belongs to the distal pole of the kidney. It is the so-called neck of the ureter. From my observations it appears to be due to the kink or bend produced in the ureter by the medial projecting distal pole of the kidney.

Three important factors are associated with the proximal ureteral isthmus, viz.: (a) it corresponds to the elbow-like curve of the ureter about the distal kidney pole; (b) the ureter is widely dilated proximal to the isthmus, and (c) at the lumen of the ureter is much narrower than the adjacent proximal or distal portions.

At present, in man, it is not always located immediately at the distal kidney pole, but at a variable distance, 1 to 3 inches. It may be situated 1½ to 4 inches distal to hilus renalis. I found many times the proximal isthmus well removed from the renal pole, and one can locate the proximal ureteral isthmus, *i. e.*, the union of pelvis and lumbar segment, only by the modified caliber constriction, neck of the ureter. The isthmus at the present stage of erect animals is not a fixed point. In a very few ureters one can not find the proximal ureteral isthmus. The proximal isthmus may measure 1 to ½ of an inch in diameter, and frequently is the narrowest point. In distending ureters with paraffin, fluids, air, the proximal isthmus is easily observed, with its kink or bend, bound quite strongly near the distal kidney pole by connective tissue, occasionally lying in a groove of the kidney. The proximal narrow (½ inch) isthmus is of vast significance because it will offer the first obstruction to renal calculi. Practically, **it is the proximal sphincter or neck of the ureter.**

The proximal ureteral isthmus or neck is practically constant for all ages and sexes. It may be a point or an inch in length. Paraffin casts alone will detect the narrowest constriction, which averages perhaps ¼ of an inch in diameter.

The proximal ureteral isthmus is so pronounced in its narrow lumen that in making paraffin casts of the ureter fractures almost always occur at this point. Investigation showed that when ureteral dilatation occurred the proximal isthmus did not share in it, nor did the other two isthmuses.

It may be stated that Ferrier and Baudoin, after examining 150 ureters borrowed from Poirrier's collection, thought that the proximal isthmus (and lumbar spindle) were not constant.

However, I am convinced that there really exists a constant proximal ureteral isthmus or neck (and lumbar spindle) in the ureter. The proximal ureteral isthmus is located at the proximal end of the ureter proper, always distal to the ureteral pelvis. The proximal isthmus impedes the flow of urine, causing a dilatation proximal to it—the **ureteral pelvis.**

In ureteral surgery it is important to recognize the proximal

ureteral isthmus or neck, as it is so narrow that it may be, and I think has been, by celebrated surgeons mistaken for a ureteral stricture. A kink or torsion is liable to arise at the proximal ureteral isthmus producing narrowing obstruction to the urinal stream, with consequent hydro ureter. During the changing position of man's body from the horizontal to the erect attitude the torsion or kink will change in intensity; hence the hydro ureter will be irregularly intermittent.

In the distalward movement of the kidney the proximal ureteral isthmus is liable to kink or torsion, because in numerous ureters it is of a very limited caliber. In observing the limited caliber of the proximal isthmus sphincter in 37 X-rayed ureters and 100 paraffin filled ureters, one is surprised that obstruction by flexion is not more frequent. Frequently it is so narrow that one might mistake it for ureteral stricture. Ureteral explorations and the X-ray frequently detect calculi lodged at the proximal ureteral isthmus. Almost 50 per cent. of calculi are obstructed at the proximal ureteral isthmus.

2. THE MIDDLE URETERAL ISTHMUS.

The middle isthmus is located at the point where it bends to cross the iliac vessels. It is about one-seventh of an inch in diameter. The middle ureteral isthmus is an original constriction from the Wolffian body, and its pronounced state is doubtless due to the erect attitude, causing a bend in the ureter as it flexes over the iliac vessels and enters the pelvis. In quadrupeds practically no ureteral angle or isthmus exist at the iliac vessels. There is a distinct ureteral flexure or angulation at the iliac vessels in man, and I shall term this the flexure iliaca ureteris. The middle ureteral isthmus is significant, as it offers the second obstruction to renal calculi; it is at a fixed bony point, the sacro-iliac joint; it is nearest to the anterior abdominal wall, and it lies the most prominent and accessible for palpation.

The flexura iliaca ureteris is not only kinked at an angle of 140 degrees, but also is narrowed to one-fifth or one-sixth of an inch in diameter. Though the middle ureteral isthmus is frequently quite limited in caliber calculi lodge relatively seldom at this point; for, if a calculus has passed the proximal ureteral isthmus, it will traverse so rapidly through the large lumbar ureteral spindle, acquiring such slight accretions that it will generally pass with facility through the larger middle ureteral isthmus. Also the rhythm of the arteria iliaca on the ureter, which rests on the artery, will facilitate the distalward movement of the calculus.

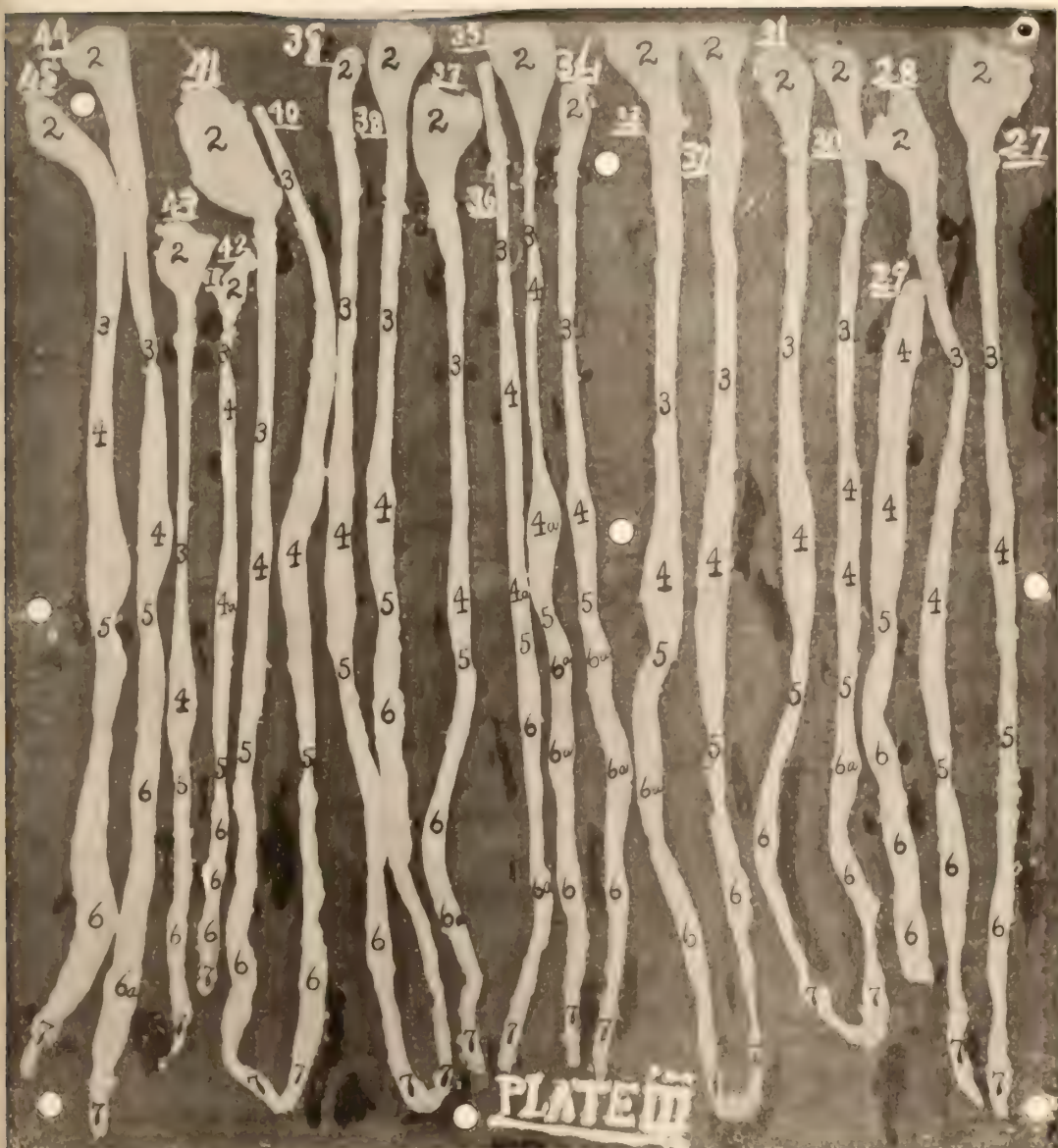


Plate III, presents nine pairs of ureters distended with paraffin presenting three isthmuses and three dilatations. The ureteral isthmuses are 3, 5, 7. The Ureteral dilatations are 2, 4, 6. Observe how easily the ureter could be obstructed by flexion or torsion at the isthmuses or how it could become obstructed at the ureteral isthmuses by calculus.

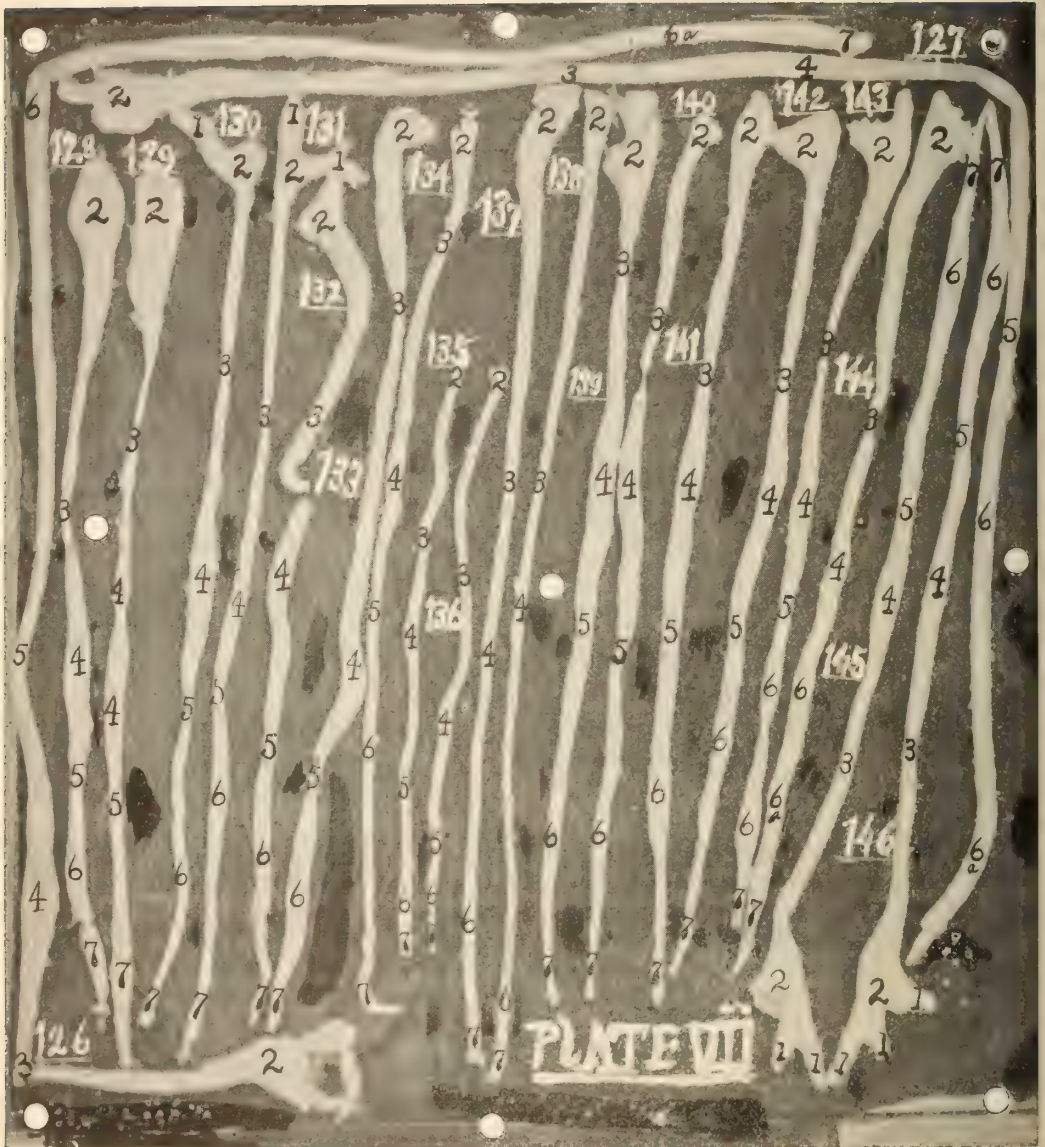


Plate VII, represents ten pairs of Ureters distended by paraffin presenting three isthmuses and three dilations. The ureteral isthmuses are 3, 5, 7. The ureteral dilations are 2, 4, 6. Note how flexion or torsion or calculus could obstruct the ureter at the isthmuses. The two long ureters extending around the margin of the plate are from a cow of perhaps one thousand pounds. It presents ureteral isthmuses and dilations. Its numbers compared to those on the ten pairs of the human.

G. Schwalbe names the curve of the ureter at the vasa iliaca the *flexure marginalis ureteris*. However, I have chosen the term *flexure iliaca ureteris*, as it is in fact the vessels which make the direct flexure in the ureter.

The X-ray and the paraffin casts of the ureter show that the right middle ureteral isthmus is shorter and liable to be narrower in lumen than the left. Perhaps the flexion or angulation is greater. The X-ray and ureteral exploration not infrequently detect calculi at the middle ureteral isthmus.

3. THE DISTAL URETERAL ISTHMUS.

This is located in the wall of the bladder at the distal end of the ureter. It is situated at the external angle of the vesical trigone. In general, it is the narrowest part of the ureter, one-twelfth to one-tenth of an inch. It penetrates the muscularis of the bladder, after which it lies immediately under the vesical mucosa, ending at the external angle of the trigone. The distal end of the ureter is separated from the bladder wall by a layer of connective tissue, making both ureter and bladder wall functionate independently. It passes for three-quarters of an inch obliquely through the bladder wall, and from this anatomic fact forms one of the most wonderful automatic valves. Fluids may pass it distalward, but can not return proximalward—no regurgitation occurs. It is the third ureteral isthmus, sphincter, ending in the bladder mucosa as an oval slit.

The distal ureteral isthmus is of vast importance, as it is the third point of resistance to renal calculi, the narrowest point of the ureter, and hence obstructs calculi the most. It is the initial difficult point of ureteral catheterization, lies at the external angle of the trigone, and forms the valve to prevent regurgitation of urine. It ends in a sensitive, smooth area, the trigone. Sphincters (ureteral isthmuses) have a high blood supply (nourishment); a delicate nerve supply (sensitive, rhythmic); a complicated lymph supply (infectious disease), and a constantly changing caliber (rhythmic, ring muscle). Ureteral isthmuses obstruct renal calculi, and X-rays and ureteral exploration demonstrate more calculi in the ureter proper than in the ureteral pelvis.

The ureteral sphincters or isthmuses are periodically functioning structures, which allow periodical passages of quantities of urine. These ureteral isthmuses are of hereditary and mechanical origin, due to the distal kidney pole or its rejecting iliac vessels in the erect

attitude and the brim of the pelvis and obstructing bladder wall. The proximal pelvic lumbar and distal pelvic fusiform swellings are the result of the ureteral isthmuses. The sharp, bending flexion of any tube will narrow its lumen, and cause dilations on the side of functioning forces.

The proximal, middle and distal isthmuses are practically constant structures, located near the distal kidney pole, at the iliac vessels (sacro-iliac joint), and the bladder wall, or external angle of the trigone. There are other irregular, inconstant ureteral constrictions in the lumbar, but especially in the pelvic segment of the ureter.

In operating for ureteral calculi which have lodged at the ureteral isthmuses an attempt should be made to force the calculus proximalward into the dilated ureteral spindles, where sufficient wall and lumen exist for manipulation. Also when the calculus is pushed into the ureteral spindles it may be fragmented by pressure, or a sharp needle may be introduced to fragment it.

The discussion whether the proximal or distal ureteral isthmus is the narrower is difficult of final decision. All three ureteral isthmuses are variable in diameter. After the injection of about 150 ureters I had concluded that the distal ureteral isthmuses in general is the narrower.

It appears to me that the distal orifice of the male ureter allows the catheter to enter with more facility than that of the female. It is more prominent, resembling that of the lower animals, *e. g.*, soliped (horse), ruminant (cow, sheep), carnivore (dog).

In woman frequently the distal orifice of the ureter is flat, non-conspicuous, no distinct groove leading proximalward to it, and hence allows the catheter to glide over its mouth.

CHICAGO, ILLS.

HEART FAILURE OR FIXATION OF THE DIAPHRAGM?

BY DR. JAMES W. GUEST, M.D.

J. L. J., aged forty-four, physician; diagnosis, typhoid fever; patient died on the twenty-fifth day of the disease, but three days after a normal temperature.

The disease ran a mild course. The highest temperature was only $103\frac{1}{2}$, and that only a few hours. One hour and a half before his death he was bright and talkative, and asked to sit up in a chair to relieve his back, which was refused. Then he talked of future plans

for the first time of his illness. Pulse 82 and about its usual strength. His wife fixed a hot water bag to put at his feet, but could not screw the metal stopper tight enough to prevent its leaking. She handed the bag to him, and he gave a sudden twist to the stopper. She took the bag and turned to place it at his feet, when she heard him say, 'I can't breathe.' She quickly turned, and seeing his deathly pallor, hurriedly summoned the house, but he was dead when response came.

W. C. T., aged forty-six, manager of a life insurance company; diagnosis, typhoid fever, commencing between the fourth and eighth day of September, 1904. The disease ran a low, even and uneventful temperature, ranging from 99½ to 103½, and dropped to normal September 24th.

The patient, being a very busy and energetic man, insisted upon a rapid recuperation. I added to the Norton Infirmary diet of sweet milk and broth a tablespoonful of panopepton every two hours, commencing six hours after first normal temperature. Two hours after the first panopepton given the temperature commenced to gradually decline, and seventy-two hours later had reached a temperature of 104½. At that point I withdrew the panopepton altogether. The temperature dropped to 102½ in the next ten hours and to normal in eighty-seven hours, and remained so.

OBSTETRICS IN A COUNTRY PRACTICE.*

BY A. E. GARDNER, M.D.

*Lecturer at the University of Kentucky, Medical Department, University of Louisville, and Health Officer for the Louisville, Ky., and Surrounding and South-Central Districts.
Senior Assistant Kentucky State Medical Examiner.*

It is not my intention to dwell upon well established practices in this brief article, but I desire to call attention to what I consider neglect upon the part of the profession in the practice of the obstetrical art in country districts. My remarks shall be suggestive, not exhaustive, and indicating points which should receive more attention than is usually given in such cases.

Except in well equipped and scientifically conducted hospitals the wonderful advance of the medical science in the last decade has benefited the child-bearing woman but little. As a rule, the same indifference with reference to her condition when pregnant, parturient

* Read before the Eastern Kentucky Medical Society, November 17, 1904.

and puerperal still remains. It occurs to me that if a physician ever can render assistance, comfort and assurance it is to a woman during parturition. What is more striking in appearance than a young girl in labor for the first time? She is in a state of fright, timidity and suspense, and has called you for advice and protection from the dangers and risks which she has assumed to add her mite to the propagation of the human race. When the young husband comes and makes an engagement with you to attend her during this, the most critical event in her life, you are then confronted with a duty and responsibility which should not be treated in a careless and indifferent manner.

Now, what is your duty in such an instance? Is it merely to get his name and address (if you do not already know), assure him that you will promptly respond to his call, ascertain the expected date of confinement, and that you hope "everything will be all right?" Yet this is all the ante-partum consideration that some women get. They all need more, and some of them much more. We are likely here to lose an opportunity, to give advice, comfort and assurance, which is no small part of our mission.

True, the country doctor labors under many disadvantages compared with that of his city brother. The text books take up considerable space in detailing the duties of the obstetrical nurse, the elaborate equipment of the obstetrician, and his numerous duties to his patients, such as frequent examinations of her urine, and his visits before and after labor. In complicated cases he has at his command able and available assistance, lying-in hospitals, and many other things too numerous to mention. In the country we have no trained nurses, but in lieu thereof, as Dr. King would say, we have untrained "nusses," the same being a mother, a sister, a cousin or a lot of gossiping neighbors. Our patients consist of the hundreds of thousands of women who live on farms and in small villages. They have modest homes, rear large families, and live in a plain and rugged manner. In many instances he has not seen, nor has been engaged to attend her until she is confined, and then he is sent for post-haste.

It frequently happens that the doctor's obstetrical outfit is not as complete as it should be. Often it is impossible to get medical aid in serious cases, and he is hopelessly left upon his own resources. There is another obstacle which I must not fail to mention, and that is the so-called midwife. They, of all other individuals, most decidedly demonstrate the old adage that "a little knowledge is a dangerous thing." The practice of obstetrics in rural districts remains to-day

largely in her hands, many people believing that all the requirements have been fulfilled when the cord is tied and the after-birth delivered. The fact that delivery at term is so nearly a physiological process makes this possible. But complications do occur before, during and after labor, and the fact that two lives are at stake instead of one, as is usually the case, makes it all the more important that the practice of obstetrics should be rescued from a position little better than was surgery in the time of the barber surgeons.

As a rule midwives are too meddlesome, and a woman might better be left without help than to have meddlesome help. On the average she is an uneducated, ignorant, uncouth and dirty individual, who for a small fee goes about infecting parturient women. Statistics seem to prove that puerperal sepsis is now as frequent a complication as in pre-antiseptic days. This is largely due to the midwife as it is in those localities where she holds sway that infection is most observed. Nearly every case of aggravated sepsis I have seen has been infected by a midwife. The whole midwife proposition is wrong and should be done away with, and no person allowed to attend a woman in confinement who has not received a diploma from a regular medical college.

I do not believe the statement made by some writer in a recent medical journal that "the practice of obstetrics is the practice of surgery," but I do believe that there are certain surgical principles involved which should have due consideration in dealing with obstetrical cases. The midwife is no doubt largely to blame for the majority of cases of sepsis, but we must not get the idea that we ourselves are beyond the possibility of carrying infection.

Another important item in connection with obstetric medicine which seriously impedes its progress is the absurdly small fees charged by some physicians—fees little better than those charged by the midwife. As near as I can learn her fee is \$2.50, and yet I have known some physicians stay with a tedious case of labor twenty-four hours and only charge \$5.00. No wonder some people think a midwife can attend such cases as well as the physician. He does not place the proper estimate upon his services. Such a fee reacts upon him in two ways: first by lowering his services in the estimation of his patrons, and second by encouraging slack and hurried work on his part. He should charge a good fee, and then earn it and collect it. Your patient knows several months in advance that he is going to need your services, and there is no reason why he should not be able to pay the cash. No

physician in justice to himself and the exalted profession of which he is a member can afford to accept such fee for attending even an ordinary case of labor, and in case of instrumental delivery it should be much more. Better services and better fees will place this department of medicine upon a higher plane, where it would command the attention of the very best medical talent, and be given the attention it so justly deserves.

As a purely financial proposition it would be eminently better to pay a liberal obstetrical fee than to give the gynecologist several times that amount to repair damages which follow in the wake of a careless, ignorant, irresponsible midwife, to say nothing of the suffering and incapacity induced by the patient.

Now, what can the country doctor do to remedy this unfortunate condition? It is certainly within his power, and to a greater or less extent he is responsible for it, and there is no other source from which relief can come. Our patients do not know, and it is not presumed that they can know unless we instruct them. I will admit that the proposition is a hard one, and will require a little time and patience on our part, but it can be done.

I will give you my plan for what it is worth. I am sure it is not without its faults, and if you can point them out and assist me in rectifying them, you will have done me a great favor.

It has been my custom for the last twelve months, when I have been engaged to attend a case of confinement, to give or send her a little pamphlet of instructions which I have prepared and put in print, to serve as a guide in making preparations for labor. It is somewhat surprising to find with what accuracy most of them observe these directions. It is written in plain, simple language, so that any individual with ordinary intelligence can read it and understand it. It reads as follows:

The successful management of a case of confinement depends largely upon the strict observance of the following simple suggestions.

The following articles should be in readiness at least three weeks before the expected day of confinement.

A. FOR THE MOTHER.

Four abdominal binders one and one-quarter yards long and one-half yard wide, made of the cheapest grade of unbleached muslin. They should be torn the proper size, with the selvage edge torn off, but are not to be hemmed or finished in any other way except to be washed

and ironed to make them soft and pliable. They should then be rolled in a clean towel and laid away in a convenient place, free from dust, until they are wanted.

Two dozen clean towels, preferably old soft ones without fringe. They should be made in a separate parcel and covered with a towel or other cloth, and are for use only about the patient and in the toilet of the physician's hands.

Safety pins, two papers of large and one of small size.

Absorbent cotton, one-half pound package.

Plain gauze, five yards in package.

Two pieces of rubber sheeting or white enamel oil cloth, each two yards square.

B. FOR THE INFANT.

Two large wash basins. Olive oil, eight ounces; one bar of Ivory or Castile soap.

Infant binders. Three or four made of soft material five inches wide.

The infant's clothing should be sufficiently large and of material suitable to the season. The garments should be made open in the back, and the under garments pulled into the outer ones so that they can all be put on the infant at once.

PREPARATION FOR LABOR—THE ROOM.

The room should be clean and warm, and contain, besides the ordinary furniture, a table covered with freshly laundried towels, two wash basins, a slop jar and a large pitcher of hot water.

The bed should be strong and firm, and provided with a good mattress. The mattress should be covered with a rubber sheet or white enamel oil cloth (the one mentioned above), over which is spread a clean white sheet. In like manner the other rubber sheet is spread and another white sheet, and all pinned firmly to the corners and sides of the mattress to prevent them from slipping and rolling up under the patient. Another white sheet is then placed under the patient's hips after being folded several times, and also made fast to the sides of the mattress. At the termination of labor the folded sheet, the one just beneath it and the oil cloth on which it lies is removed, leaving a clean bed on which the patient can rest. All the clothing used about the bed should be absolutely clean. The future health of the mother and her infant depends largely upon the enforcement of a simple and strict rule of cleanliness of everything used about them.

It is advisable to call the physician as soon as labor pains begin, and while awaiting his arrival the patient should be given a bath of warm water and soap. If she is not able to use the bath tub a sponge bath will answer better than none at all. She should then put on a net undershirt and a clean white night gown and she is ready for the ordeal of labor.

After given her the above pamphlet I inquire as to the patient's state of health and previous labors and abortions, and if the information thus obtained justifies it I call for a specimen of her urine for the purpose of chemical analysis, and perhaps insist upon the importance of calling to see her in advance of her confinement. By so doing it is possible to give such advice and treatment as will prevent a serious attack of puerperal eclampsia, or other complication, and in addition ascertain the position of the child, and secure the confidence and co-operation of the patient in her own behalf.

Chief among the advantages of written instructions is that it saves time and obviates the necessity of giving verbal instructions which are usually forgotten, incomplete and lacking in detail.

The physician's obstetrical outfit for a country practice should consist of: One Kelly pad of large size, six ounces chloroform, two ounces fluid extract ergot, small vial boric acid, bichloride tablets, sterilized vaseline, one yard iodoform gauze 5 per cent., one ounce absorbent cotton, tapes and dressings for cord, one obstetrical forceps, one female cathether, one douch tube, one needle holder, needles straight and curved, silk sutures, one douch bag, chloroform inhaler, one soft rubber catheter and a good nail brush, all neatly wrapped and packed in ordinary obstetrical bag.

After thoroughly washing and disinfecting his hands, he should make the usual examination, and then see that every preparation for labor has been carried out according to his instructions. It now becomes his duty to encourage and comfort his patient, and assist her in every way possible to a speedy and natural delivery. In cases of primipara, when the pains are slow and ineffectual, and the os is sufficiently dilated, the membranes should be ruptured, thus allowing the uterine contractions to bear directly upon the child, the pains becoming more effectual, less "cutting" in character, and the progress of labor more rapid. Towels wrung out of hot water, applied in quick succession, will sometimes prevent rupture of the perineum. I have but little confidence in other methods.

Medical writers have a great deal to say about the third stage of

labor and the so-called Crede method of delivering the after-birth, but in deference to what they say I am in the habit, when it comes to deliver the after-birth, to grasp the fundus with the left hand, and with the right thoroughly aseptic, pass it into the uterus and reaching over one edge of the placenta, gently pulling it down, and the uterine contraction forces it away. I have never had any serious results follow this method, and it is comparatively without pain.

When the third stage is complete the patient should be given a bath, a half teaspoonful of fluid extract ergot, and the abdominal binder snugly applied. A strip of soft goods four inches wide should be sewed to the lower edge of the binder behind, a vulva pad made out of the absorbent cotton and sterilized gauze and placed in position, the strip brought over it and pinned to the binder in front. The pad should be removed three or four times a day, and after an action of the kidney or bowels, and each time to be replaced with a new one. The bowels should be moved on the third day with some mild laxative, and the patient is instructed to keep her bed for ten days, and to eat a light diet consisting of eggs and milk and light cereals.

Progress of Medical and Surgical Science.

Rupture of Uterus During Labor.—Dr. Edgar Down, of London, reports in the September 10th number of the *Lancet* an interesting case of rupture of the uterus during labor in which a laparotomy was done, the mother and child both recovering.

The history of the case is as follows: The woman was thirty-eight years of age, and had been married thirteen years. Her first pregnancy had terminated at the sixth month, the child being still born. The second ended in six and one-half months, the child being again still born. The third pregnancy went to full term, and the child is still living and healthy. During this pregnancy she was taking the per chloride of iron. The fourth, fifth and sixth ended in a miscarriage. At the seventh pregnancy she was under Dr. Down's treatment, and this time took iron. Up to term the fetus was alive. The child was born dead. There evidently was a concealed hemorrhage, the mass of clots were expelled after the delivery of the placenta.

At this last pregnancy pains began at 1 A. M., and Dr. Down saw the patient at 5:30 A. M. On examination the os was found dilated; the brow was presenting at the brim of the pelvis. An attempt was made to convert the brow into a vertex without success. An assistant was then called and chloroform administered, forceps applied and an attempt made to pull the head down; but a ring of contraction was found around the neck. No further attempt was made to save the child, and a craniotomy was thought of. In the meantime there was a profuse hemorrhage from the uterus, an examination was made and the presenting part had receded, and an extensive laceration of the uterus was found, through which the hand could be easily passed into the abdominal cavity.

A laparotomy was resorted to, the nurse gave the chloroform, and the operation was performed by Dr. Down and his assistant with the instruments he had in his pocket case. An incision was made from the umbilicus almost to the pubes, exposing the rent in the uterus; the child was delivered through the rupture. The placenta was then delivered through the rupture. The uterus was now brought out of the cavity and the rent exposed, which was situated on the lower and anterior surface, running obliquely right across from left to right.

The rent was carefully sutured, a blanket stitch with thick catgut for the deep sutures was used, and the peritoneum carefully brought together with fine catgut. The uterus contracted well. There was no hemorrhage from the placenta site, but some rather free bleeding from one corner of the uterine wound, which was stopped by a deep suture. The uterus was returned to the abdominal cavity, and the parietal wound was united by silkworm gut sutures. The whole operation was very quickly performed, and the condition of the mother at the end was wonderfully good. There was practically no temperature throughout, the highest recorded being under 100 F. The abdominal wound healed well, and the stitches were removed on the tenth day. The patient was up at the end of three weeks, and is now quite well. The baby is also thriving.

This case has certainly proved of interest: First, because rupture of the uterus is a rare calamity; and second, it is a question whether or not traumatic injury was a causative agent in the tear; or whether some pathological condition in the uterine muscle was responsible.

Suture Material.—While the field of surgical pathology, bacteriology and physiology has been widely extended, the more technical aspects have been neglected during the recent years according to v. Mikulicz (*Deut. med. Woch.*, September 29, 1904). Silk and vegetable fibers are the most prone to give rise to wound infection. In places where the entire absence of germs from the wounds can not be guaranteed, metal wire is strong, lasting and antiseptic, but can not well be used for buried sutures. Silkworm gut presents similar characteristics. Catgut and other animal sutures can be made perfectly antiseptic, but they are too rapidly absorbed. The author suggests the use of tanned catgut, which is prepared as follows: The strands are wound on glass plates, and then immersed for twenty-four hours in a 5 per cent. aqueous infusion of quebracho bark. Sterilization is done by the Hofmeister method. By this treatment the material gains in tensile strength, and its absorption is delayed for four weeks; both the processes may not be complete for eighty to ninety days. The author has used this material for abdominal sutures after gastric and intestinal operations, and found it very satisfactory.—*Medical News*, November 12, 1904.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

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AMERICAN PRACTITIONER AND NEWS PUBLISHING CO., Louisville, Ky.

Editorial.

THE PRACTICAL BEARING OF THE THEORY OF IMMUNITY.

Since Ehrlich set forth our present day theory of immunity, workers in that field have developed such facts as to at least now become of some practical bearing of value to the physician. Along these lines lately Wasserman, of Berlin, has been working, and in a communication before the St. Louis Medical Society (*Medical Fortnightly*) he (Wasserman) gives expression to what promises to be of real value to the physician of the practical side of the theory of immunity. As a result of our knowledge of the facts concerned in immunity our present serum therapy has been developed. In the experimentation and the development of immunity of the lower animal, certain facts have become patent and may be of importance to the physician. First, it is known that an immune serum acts in a specific manner; that is, the blood of an animal rendered immune to typhoid fever protects the animal only against typhoid and not against other infectious diseases; likewise, one rendered immune from diphtheria immunizes only against the diphtheria bacillus, or its toxins; therefore, from a diagnostic standpoint, this may in many cases be of positive value in the diagnosis

in such cases. In the matter of doubt as to the character of the infection the specific character of this serum thereby becomes of great aid in establishing a differential diagnosis. In throat troubles this could be used to great advantage where laboratory methods are not ready at hand. If a case has the clinical appearance of diphtheria, and the Klebs-Loeffler bacillus is not present, an injection of the diphtheria antitoxin would have no effect in the course of disease. A further diagnostic measure of practical application is the peculiar Widal reaction, which is the special agglutinating action of the typhoid patient's serum toward typhoid bacilli. Likewise will this field be broadened and of value with the development of different sera.

Wasserman states in the communication already referred to that while the antitoxin, the result of the labors of Behring, will undoubtedly, as we know, destroy the disease itself, it still leaves active in the throat live bacteria, which may do a great deal of harm. He further states that he has discovered lately a serum which he prepared in the Pasteur Institute that not only does all that the Behring serum does, but that the bacilli in the throat disappear much more quickly.

EDITORIAL NOTES.

The annual meeting of the Louisville Clinical Society took place on November 22d, at the Pendennis Club. At this meeting the officers for the ensuing year are elected. The following members were chosen :

For President, Dr. F. W. Samuel; Vice President, Dr. J. M. Morris; Secretary and Treasurer, Dr. Ellis S. Allen.

As is customary at this meeting all business is suspended, and the members vie with one another in making it a love feast. The Louisville Clinical Society, which is one of the oldest in the city, can well congratulate itself that the past year has been one replete in its history. The attendance has been larger than in previous years, representing on an average seventeen members at each meeting out of a possible twenty.

Dr. Joseph W. Irwin, as has been his custom for the past three years, entertained the Society with a delightful menu. The evening was made more delightful and charming by full membership, which assembled around a well-laden table, and conviviality reigned

throughout the evening. The retiring President acted as toastmaster in his inimitable way.

In this issue will be found a poem by Dr. Ewing Marshall, who responded to the toast, "A Poet's Fancies." Dr. Marshall is well entitled to the honor of having given a great deal of spice to the evening's entertainment in the composition of this poem. This happy vein of humor is so natural to Dr. Marshall that he has become known as the Clinical Society's poet.

The following is a list of the members and the toasts to which they responded:

Annual dinner of the Louisville Clinical Society, Pendennis Club, November 22, 1904.

DR. JOSEPH W. IRWIN, MASTER OF CEREMONIES.

Things New and Useful.....	Dr. Irvin Abell
Health and Happiness.....	Dr. M. K. Allen
The Young Physician.....	Dr. E. S. Allen
Travels Abroad.....	Dr. P. F. Barbour
The Clinical Society.....	Dr. Wm. Cheatham
Mechanical Therapeutics.....	Dr. M. F. Cooms
Medical Literature.....	Dr. S. G. Dabney
The Doctor's Microscope.....	Dr. J. A. Flexner
The Hand of Fellowship.....	Dr. Geo. W. Griffiths
The Physician's Sunshine.....	Dr. W. Ed. Grant
A Dream of Things to Be.....	Dr. H. N. Leavell
The Honest Doctor.....	Dr. J. M. Morris
The Poet's Fancies.....	Dr. Ewing Marshall
Medical Libraries.....	Dr. T. P. Satterwhite
Medical Journalism.....	Dr. F. W. Samuel
We Live in Deeds, Not Words.....	Dr. J. R. Wathen
The Use of Education.....	Dr. W. H. Wathen
The Doctor of Yesterday, To-day and To-morrow.....	Dr. Carl Weidner
The Young Surgeon.....	Dr. A. D. Willmoth

Dr. Joseph Taylor, of Cromwell, Ky., has associated himself with Dr. Stanley, formerly of Hopkinsville, Ky., in a partnership at Hartford. Ky.

Book Reviews.

Text Book of Nervous Diseases and Psychiatry. By Chas. L. Dana, A.M., M.D., Professor of Nervous Diseases and (ad interim) Mental Diseases, Cornell University Medical College. Sixth Revised and Enlarged Edition, 244 Illustrations. Price, \$4.00. net. New York: Wm. Wood & Co., 1904.

The addition of psychiatry to this volume will be welcomed by both student and practitioner. Slight changes have been made in the chapters on nervous diseases, noting the advances and changes since the last edition.

The work is a complete, practical volume upon this important branch, and can be heartily recommended to all. To review it is to recommend it.

J. E. MOREN.

Dunham's Normal Histology. A Text Book on Normal Histology for the Use of Students and Practitioners of Medicine. By Edward K. Dunham, Pa. B., M.D., Professor of General Pathology, Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. New (3d) edition, revised and enlarged. In one octavo volume of 334 pages, with 260 illustrations. Cloth, \$2.75; net. Philadelphia and New York: Lea Brothers & Co., 1904.

In this work we have fundamental ideas that are of distinct aid to the student, not merely a compilation of facts, but matter laid down by a teacher of wide experience.

The author has realized that histology should be largely taught by practical work and experience in the laboratory, and that the student must become versed in the method of preparing specimens and in the technique of staining.

The subjects are well treated and well correlated. He deals with the cell as the active constituent of tissues, and that the tissues are composed of cells and intercellular substance, and that the structural detail of tissues is so arranged according to usefulness. He makes clear that the ability of tissues to work depends on the size and arrangement of the cells.

A special chapter on "Histological Technique" is a timely addition.

E. S. A.

THE POET'S FANCIES.

Into what realms a poet's fancies lead,
From lowest hell to wild fanatic's creed;
From the rigors of a midwinter's snow
To the green hills where the sweet June breezes
blow.

Desiring that my fancies shall be free,
As our toastmaster has requested me,
I started forth upon this rambling way,
As light as air—just simple thought at play.

Lest jest should touch a sore spot, causing pain,
'Fore it festers we'll call it back again;
And if, perchance, I be misunderstood
I ask apology before I'm rude.

My chosen friends, to whom I do belong,
In sympathy, in love, or in mirthful song,
Around this festal board are gathered here;
I would not hurt them, for they are too dear.

Now I'll fling you off a ditty,
Which I hope you will find witty,
With no serious pokes,
But all taken as jokes,
Or if not—more's then the pity.

Griffiths, the accident chaser,
Who is the devil to face, sir,
But there's no better friend
That God ever did send,
And we want none in his place, sir.

Then Satterwhite gentle and true,
Who will gladly agree with you
If you do but his way,
And he'll quietly say
That his idea just suits you, too.

The Wathens—buzz saws in motion,
When crossed they make a commotion;
But when called on for aid
Their help's never delayed,
Comes like the tide of old ocean.

Cheatham's never caught unready,
Though his voice at time's unsteady,
For he sits very still,
Thinking deeply until
For the subject he is ready.

Carl Weidner, irascible, rare,
Who quickly goes up in the air
When some bugs are around
Which his eyes have not found,
But in reason he's always fair.

Irwin, the facile and moody,
In passion alone would rude be,
But his heart is all right,
Be it fun or a fight;
In eating—yes—yes—a dude he.

Samuel, with manner so cute,
You may never know his long suit,
For he sits boldly there
With a half vacant stare,

Yet his mind is full in pursuit.

If you go around this table
None handsomer find than Abell;
For his age he's a sage,
And well worth any wage,
He's true as well as capable.

Cooms, who is fair, fat and forty,
His stories are ever naughty,
But no evil is left,
Nor truth ever bereft,
And his friends' good ever sought he.

Old Dabney, the gracious and strong,
Is ready to admit he's wrong
If the facts won't him hold,
But he's tough and he's bold,
And hard knocks he'll stand right along.

Leavell, facetious and sunny;
Grant, who delights in the funny;
They are a strong pair,
For they'll both do and dare
To honestly earn good money

Of Allens we have quite a few,
Though 'tis true there are only two;
For in every way
They are truly *au fait*
With anything that they may do.

Then comes that deceptive Barbour,
Looks like the melancholy robber,
You'll find plenty of fun
When his face is done,
His heart much of hope doth harbor.

Statistics quoted by Flexner,
Generally are correct, sir;
They come from German lore,
Of which he has a store,
And they will make you reflect, sir.

Our Morris, old Clifton, cloth own,
For his harvest well has he sown;
Whatever's the matter
He's up and at her,
Therefore fast has his practice grown.

Willmoth's beginning to arrive,
For his bees have begun to hive,
And he's quick on the wing,
Time doth his metal ring,
For the best alone doth he strive.

So through our list I did meander,
With clownish wit to your folly pander,
But fearing your patience is long o'er tried,
No more of these flings shall now be supplied.

A simple *motto* I'll propose to you,
And a standing toast for it I will sue,
A *clinical* having sorrow or fun,
One must stand by all, *all* must stand by *one*.

Society Proceedings.

PROCEEDINGS OF THE LOUISVILLE MEDICAL AND SURGICAL SOCIETY, OCTOBER 17, 1904.

EXHIBITION OF PATHOLOGICAL SPECIMENS.

Dr. Abell: I have here some specimens of gall stones that are in themselves of no particular interest, but there were several features connected with the case that were of great interest to me, and I would like to report them to you.

The patient was a woman, aged forty-two, giving the following history: She had gall stone at the age of eighteen; this is rather young, but a number of cases are reported where gall stones have been found in younger individuals. She was not operated on. She had an attack at the age of twenty-two, and another attack at the age of twenty-four. In the succeeding twenty-four years since the first history of the gall stone colic she has had a number of such attacks. The diagnosis had never been positively made until last spring.

While she has had typical gall stone colic she has never at any time shown any evidence of jaundice as referred to the skin or urine. I understand that in a number of cases diagnoses have been made by finding bile pigments in the urine.

The gall bladder was entirely obliterated, there was practically nothing, the gall bladder would hardly admit a peanut. It was impossible to get the finger in it.

The stones, some twenty in number, were found in the cystic duct. The adhesions covered in the gall bladder from the duodenum and transverse colon; they had evidently existed for years, particularly those involving the colon, since in separating those we destroyed the coats of the bowel down to the mucous coat. This was covered by a purse-string suture and later by the Lembert. By opening up the dilated duct I could palpate to the hepatic duct. It resembled somewhat a sclerotic artery.

These stones had never involved the common duct. A point of interest was how this could exist for years, the woman suffer from repeated attacks of colic, and have all these inflammatory changes around the ducts, and never have any jaundice. You can see from the faceted condition of the stones that they were packed in tightly.

After getting the adhesions separated it was an easy matter to remove the stones from the enlarged ducts. The further treatment consisted of putting in a tube and packing with gauze.

It has been recommended by the later writers that in conditions like this the cystic duct should be removed. If the conditions had been favorable I would have done so. The abdominal walls were very thick, the adhesions were extensive, and this would have made the operation a long one. She was on the table a little more than an hour. It was an extremely difficult matter to get at it. She bled freely in separating the adhesions, and removing the gall bladder would have exposed her to more danger than was justifiable, and I contented myself with removing the stones and placing in tubular drainage.

I would be glad to know if any of you have ever noticed gall stones remaining in the cystic duct for this period of time, or in repeated attacks of gall stone colic that the common duct has remained uninvolved.

Dr. Speidel: I would like an explanation of the colic under the circumstances. If the common duct was not involved and the stones encysted, the pain must have been due to the adhesions around the cystic duct. Were the gall stones the cause of any trouble at all under the circumstances?

The explanation of gall stone colic in the majority of instances is that a stone is entering one of the ducts and trying to pass through. In this case there was no possibility of anything of this kind, and it is difficult to see how the colic continued in the case.

Dr. Wathen: I listened with pleasure to the doctor's interesting report. In regard to the point brought out by Dr. Speidel I take a somewhat different view as to the cause of the pain. I believe that the pain is due to the rythmical contraction of the gall bladder in trying to empty itself of the stones and the passage through the cystic duct of the gall stones would account for the pain.

As regards the particular operation that Dr. Abell performed, he did the only thing that could be done. I think the ideal surgery would have been the removal of this gall bladder and cystic duct. Dr. Hans Kehr, in his report of 920 cases calls attention to the technique by which he handles this particular type of case where the gall bladder is adherent to the surrounding viscera. He simply enucleates the inner lining of the gall bladder, leaving the other coats on the outer side. This obliterates the gall bladder, and avoids leaving any structures that might develop into carcinoma of the bladder. I do not know the

particular circumstances in this operation, and do not know whether the inner lining could have been removed or not.

Dr. Abell is to be congratulated on the success of this difficult case. There is no region harder to reach, and do good surgery than the gall bladder.

Dr. Ireland: I think Dr. Abell is to be congratulated upon the speed, or little time consumed in this operation. These cases are difficult. I have had a very limited experience, having operated on two cases for gall stones, one very similar to this one Dr. Abell reports. She had very thick abdominal walls, a small gall bladder up under the liver, and many adhesions, making the operation difficult, and an hour is a very short time to consume in an operation of this kind.

I have observed in my own practice and in that of others a condition just like that Dr. Abell mentions.

The stone not going down into the common duct, I approve of Dr. Abell's procedure in not attempting to remove the cystic duct or gall bladder. While, as Dr. Wathen says, that may be ideal surgery, under the circumstances I think he did right in stopping where he did.

Dr. Abell (closing): I have nothing further to add. In reply to Dr. Speidel, it is generally accepted that the gall stones cause the colic either by their passage through the ducts or by acting as a foreign body in the bladder or in the duct, not necessarily in the bladder.

I have thought that originally the gall bladder was distended, as we frequently see it. I have in a number of cases removed stones from the cystic duct in which the gall bladder retained its normal size. In the repeated efforts to get rid of these stones the walls have become thickened and the cavity so small that the finger could not be gotten into it, and there was nothing more than the duct itself. The cystic duct could be determined and palpated by the passage of a probe into it.

Dr. Wathen: This specimen I present to-night is that of an enlarged prostate associated with calculus in a man seventy-four years of age, who for the past two or three years has had a good deal of trouble in the passage of water; he would have frequent attacks where he would be compelled to resort to the catheter.

About twelve days ago I removed this prostate and stone, assisted by Drs. Bullitt and Abell.

I merely wish to present the specimens this evening, to report the good condition of the patient, and to dwell upon the particular technique employed in this operation.

This prostate and stone were removed by the straight median incision, cutting down upon a staff and opening the urethra at the prostate, and the introduction of a new appliance known as Young's Prostatic Retractor, which I exhibit this evening.

This retractor is introduced into the opening in the urethra and passed through the prostate into the bladder, and then revolved in such a way as to spread the blades, and the gland can be brought down further through the perineum. The incision is made on either side of the urethra in the capsule, and the gland enucleated with the finger. Later the instrument is removed, and the opening made in the urethra and the bladder is enlarged, and any foreign body removed from the bladder.

The after treatment consists in the introduction of a drainage tube which was fastened in the perineal wound.

This man was operated on twelve days ago, and is progressing nicely, with no temperature and normal pulse.

As you all know as to the individual technique, there is great diversity of opinion, some preferring the perineal and others the suprapubic route. By the perineal method there are a number of procedures by which it can be removed. I merely report this case as illustrative of this new method of Hugh Young, of Johns-Hopkins, and I think it one of the most satisfactory for certain selected cases that we have. It simplifies the method, and allows the prostate to be brought down the same as the uterus is brought down by vulsellum forceps.

In order that you may better appreciate what I mean I exhibit a copy of *The Annals of Surgery*; it has an exhaustive article on this subject, and it is well illustrated.

Dr. Abell: I had the pleasure of assisting in this case, and it was a pleasure in more ways than one, since my experience with operations of this character have always been by the perineal method, and I was glad to witness an operation in which the gland was removed by an incision in the prostate through the prostatic urethra. In this instance the prostate was drawn down into the wound, after free dissection of the lower portion by means of this instrument.

There are many advantages possessed by this instrument. It brings the prostate into the field of vision. In the other methods we depend upon the sense of touch. You can eliminate all element of danger to the vesical neck from the fact that it is brought down in the field. In this case, in which the instrument could be introduced, it was a good

procedure. There are some cases in which you would find it difficult to introduce this instrument through the prostatic urethra. Had I known that Dr. Wathen would bring up this subject I would have brought some specimens.

In one of my cases the prostate had so constricted the prostatic urethra that there was one little section about the size of a ——— that extended into the lumen of the canal, and it was impossible to get in an instrument of any kind. In such cases it would be difficult to get in an instrument of this kind except by enlargement of this obstruction to the canal.

The rapid recovery of a man of seventy-four years of age, and the fact that a stone of this size was removed through the incision seems to place the perineal method far above any method heretofore employed.

I have employed the infrapubic method. The patient is able to empty the bladder, and after the urine leaves the bladder he feels that he has completed the act, but the urine accumulates in this little cavity from which the prostate has been removed, and trickles out of the urethra and soils the clothes, and requires the wearing of some form of rubber apparatus. This has existed in some cases that I have had for three months. In the operation which I have employed the floor of the urethra has been removed. It leaves this entire area open, and the urine has access to it.

In the operation employed in this particular case that is done away with. Since seeing the method employed by Dr. Wathen in this case I am satisfied that it is one of more than ordinary merit.

The status of operations on the prostate at this time is simply that which each individual has used for himself. Each individual employs a different method. One claims to save the ejaculatory ducts. In the majority of these patients, especially in the man of seventy-four years, his ejaculatory ducts are not of very much use to him. This point, I think, carries little weight. In these conditions, if they possess any sexual power whatever, it is greatly diminished or destroyed. The only criticism that I have had suggested by patients is on this point. I explain to them that they will lose their sexual power or it will be greatly diminished.

REPORT OF CASES.

Dr. Guest: Dr. J.'s case was one of the mildest I have ever seen. There were one or two elements that were not satisfactory from the

beginning. Dr. J. had never been a strong man; he and his wife realized that fact; they talked it over through life that he never could get over a serious illness; when he was first taken sick they both expected that he would die; but the disease was so mild that I did not pay much attention to that part of it, not as much as I would had it been a serious case.

I saw him about half past ten or eleven o'clock, and he died about a quarter of an hour afterward. He seemed bright when I saw him, and for the first time since he had been sick he talked of the future and of his plans, telling me that he was going to limit his work to office practice.

Dr. Cecil agreed with me that if Dr. J. had any kind of hemorrhage in his anemic condition he would die, so I wondered if he could have died of hemorrhage or heart failure. His wife told me the incident of the hot water bag this afternoon. I do not know how much strength he put into the act of twisting the stopper.

In regard to the panopepton, I usually put my patients on panopepton to the exclusion of sweet, mild and buttermilk. I notice that they waste less on panopepton; I give it in tablespoonful doses every two hours. This case was a mild one, and I prescribed the ordinary diet of milk and broths, waiting for him to become serious to put him on the panopepton. When he said that he wanted to get out quickly I put him on the panopepton. When I withdrew it his temperature went to normal.

Dr. Zimmerman: I was much interested in the report of these cases, particularly in the first one; he was a member of our profession, and we all regret the sad termination of the case. Dr. Guest reported that it was a mild case, and that serves to teach us that we should never treat a case of typhoid fever lightly, no matter how mild it may be.

As to the cause of death here, it seems to me that it must have been due to cardiac failure. I do not see how hemorrhage could produce such a rapidly fatal termination. As I understood the case reported, the pulse within a few hours before death was 82, patient feeling well, and no signs of any trouble at all. We know that sometimes the poison of this disease spends its force upon the heart muscle, or upon the nervous mechanism of the heart, and leads to a condition of extreme irritability of the heart, and any slight exertion of the patient might be the cause of immediate failure of the heart. The effort exerted with the hot water bag might have been sufficient to

produce it. At least, it is reasonable to suppose that this exertion had something to do with it.

This weakened condition of the heart comes on in these mild cases where the symptoms have not been markedly severe, where the temperature has not been high, and where the heart at no time has shown any embarrassment whatever.

I have a patient now, a little girl, that ran a very mild course, pulse never at any time above 90 until after the temperature had been normal for a number of days, and in making my daily visit I found the pulse so irregular that I could hardly count it. Upon making inquiry I found that she had been sitting up in bed for ten minutes. The temperature had never been above 103°, and this occurred four or five days after the temperature had been normal. When I found this irregular pulse the patient was feeling well, and has felt well since. I have kept her absolutely quiet in bed, not allowing her to raise her head above the pillow; pulse is still irregular.

I think we should learn from this one case that we should never treat a case of typhoid fever, no matter how mild, as an insignificant or slight affection, but we should treat them as if we feared or really expected something to occur; otherwise we will be fooled.

In regard to the second case, I fail to see how the panopoeion could have been the cause of the elevation of temperature. It seems to me to have been merely a coincidence.

Dr. Speidel: The case of the sudden death of Dr. J. is particularly interesting to us, and the sudden death in this case reminds me of a case in which I lost a patient, in which the symptoms were so mild that on the tenth day the patient asked to sit up. Fortunately for myself, I warned the family of the danger.

I was called in the afternoon, and found the patient suffering pain in the right side, associated with bloody sputum. I could find no definite symptoms in the right lung, but on the succeeding day the left lung filled with subcrepitant rales; pneumonia developed of a distinctive type; the entire left lung continued to show signs of subcrepitant rales; consolidation did not take place. The patient finally succumbed three weeks later, in spite of the use of oxygen and everything that we could use. The typhoid symptoms had subsided.

Dr. W. T. McKinney: A sudden death that happened in the practice of a physician in a neighboring town might give us a solution of the death of Dr. J.

The case, as the doctor reported it, was an aged woman close to sixty, who had been ill for some time and was in a weakened condition

It became necessary to administer a hypodermic of morphine, and she died immediately afterwards. The only solution he could give of the sudden death was that in inserting the needle the shock or pain caused a fixation of the muscles of respiration. When the needle was inserted she held her breath for a moment, and she did not have energy enough to overcome the fixation, and she died—as Dr. Guest reports Dr. J. did. As the doctor turned he heard a gasping sound, she was deathly pale, and died in a few seconds.

In muscular efforts on our part to do things there would be a holding of the breath, and in the particular case of Dr. J. in his effort to fix the hot water bag he held his breath, thereby fixing the muscles of respiration, and not having energy enough to overcome that he died from the effects of it. That may be the solution or it may not; at any rate, I believe it is well worth considering, especially in patients that are weakened and emaciated, where it becomes necessary to give a hypodermic injection, the pain of which might cause them to suspend respiration for a short period.

Dr. Ireland: Just a few words as to the cause of the death of Dr. J. I believe it was one of two causes—one the fixation of the diaphragm in his effort to hold himself, or by moving this hot water bag, and thereby producing a paralysis of the diaphragm; the other a paralysis of this weakened heart. Of course in typhoid fever we have a weakened heart muscle, and the effort to fix the hot water bag could have been too great for his heart and it became suddenly paralyzed. Another cause could be explained possibly by a cerebral embolism.

A little later, if I am not out of order and the time allowed me, I would be glad to report a case along another line.

Dr. H. A. Davidson: I wish the gentlemen present had discussed the newer drugs in the treatment of typhoid fever more than they have. I would like to say a few words along that line. We hear a great many criticisms of acetozone; it is claimed that it is not palatable, that patients will not take it, and that it is not a reliable drug. I want to say that I have had very satisfactory results from its use this summer and fall. I have treated seven or eight cases. I start out with the sulphocarbolates, and if the fever is high I put them on acetozone, and in thirty-six hours the temperature will drop from one and a half to two degrees, and the temperature will not come up high in the course of the disease while on that drug. I have had good results with acetozone, and not a single patient refused to take it, and they seemed to like the taste.

The sulphocarbolates of sodium, zinc and calcium I had used a great deal before using acetozone. I like them much as intestinal antiseptics in typhoid, but they are not as good as acetozone.

In regard to the cause of the death of Dr. J., I would like to ask Dr. Guest if there were any valvular lesion of the heart. It is possible that he might have had an embolus from some valvular disease of the heart. It is merely a theory.

Dr. Guest: There was no valvular lesion of the heart.

Dr. Coleman: I had hoped to learn something of the theories of each one in treatment of typhoid fever. I had hoped that it would be an experience meeting.

As to the diet in typhoid fever, I agree with Dr. Wathen, having seen some two or three articles within the past four years, and I believe, as he suggests, that this is the ideal food. But where can we get one better than sweet milk? The broths and the panopepton contain little nourishment; they are merely stimulants. Sweet milk is the ideal food, and I always prefer sweet milk and buttermilk when well borne, but when not well borne we have to use something else, and I believe we have nothing better than the panopepton and the broths. Sweet milk is considered to produce a favorable soil for the growth of germs.

There is one point in which I am in doubt in the treatment of typhoid fever, and that is how far we should feed the typhoid patient in order to prevent this excessive tissue waste and the degeneration of the heart muscle and every other muscle in the body? How far can we feed with safety to prevent this waste? I believe it is an important point, and one I am not able to form a definite opinion about from reading the authorities. I believe it is important; if we could feed more with safety we would prevent this waste.

I know several excellent men who feed eggs, four, five or six every day during the course of typhoid fever and claim excellent results. I believe sometimes we starve the patient, and cause him to die of exhaustion or heart failure.

As to the drugs used in typhoid fever, I can not find any that suit me better than a combination of eucalyptol, guaiacol and ———, suggested to me by the Woodbridge treatment several years ago. I have followed this treatment six or seven years, and have reported to this Society several times what I considered great results. I have had good results in one hundred and fifty cases, and would not exchange it for any drug I know.

Acetozone I have used a year or two with fairly good results, not enough to speak favorably of.

I wish each one would have given the newer drugs—the special drugs upon which they depend. It would be interesting.

Dr. Kiefer: In regard to the death of Dr. J. I think heart failure caused it.

As to the treatment of typhoid fever I have no set rule—just treat it as the symptoms arise. I have used acetozone a great deal, and am greatly in favor of it. I have marked results in the use of the sulphocarbolates. I like the ——— preparation in combination with a little extract of cascara, which acts nicely.

In regard to the panopepton, I use it sparingly, and depend upon the broths and egg water more than anything else.

Dr. Reesor: Just a word as to the drugs I depend upon in the treatment of typhoid fever. I simply treat the case symptomatically. The thing I depend on mostly, you might say, is local treatment. I gain two points by using the local treatment. I use a mild solution of permanganate of potash as an intestinal antiseptic, making an enema out of it, and at the same time get the effect of the enema and the antiseptic effect of the permanganate. By using cold water I reduce the fever about one and a half or two degrees, and it keeps the temperature down much longer than bathing.

Referring to the recent case of my father, the temperature ranged from 104° to 105°. We used the permanganate in the morning, and it would keep the temperature down two degrees. In the afternoon it would keep it down the same way. I never gave him anything else except something to keep him quiet at night. I gave him sweet milk and panopepton.

At the beginning of the case he had a slight hemorrhage; after putting him to bed and keeping him quiet the symptoms all subsided, and he had no trouble; pulse good and his temperature easily controlled by the high enemata of permanganate solution.

Dr. J. R. Wathen: A question in regard to the statement of Dr. Ireland that Dr. J. died from fixation of the diaphragm. I would like to ask Dr. Ireland how it was that Dr. J. was able to speak, and how it was he turned white in place of turning black in the face? If I understand the physiology of it, if the heart had stopped beating we would expect anemia of the face, and if respiration stops we expect a purple face. He turned white in place of dark and was able to speak. How does he reconcile the facts? I think he died from failure of the heart and not respiration.

Dr. Ireland: I can not reconcile these facts. I did not understand Dr. Guest to say that he spoke. If the diaphragm is fixed it is impossible to speak.

Dr. Guest: I believe he died of cardiac failure. The point was that he was so well off at the time. He never was a strong man; he always had a thready pulse while up going around. He had a pulse of 82 and natural for him at the time. He never had a strong pulse.

Dr. Bailey and Dr. Cecil and I were never able at any time to find a valvular lesion of the heart.

In the second case of typhoid fever the patient was taking sweet milk and broths, and on the tenth day his temperature was normal. He was anxious to get out to work, and I had had such favorable results with panopepton that I ad led this to his diet. I am confident that he could not assimilate it all. As soon as I withdrew the panopepton the temperature began to drop in seven or eight hours.

I do not know what the doctor means by egg water. I had one case, a girl that worked in a factory, and it was hard to get anything to lie on her stomach until her sister told me that she was an egg sucker, and we put her on eggs three times a day. If that is what he means I have had one case.

THE BUTLER COUNTY MEDICAL SOCIETY

Met at Morgan, Ky., Thursday, November 17, 1904, at 10:30 A.M., the following officers being present:

R. L. Glasscock, M.D., President.
J. W. Grubb, Vice President.
A. E. Gardner, M.D., Secretary.
P. E. James, M.D., Treasurer.

PROGRAMME.

Address by the President.

"Abortion," by Dr. P. H. Austin. Discussion by Dr. S. S. Reynolds and Dr. G. C. Threlkel.

"Obstetrics in a Country Practice," by Dr. A. E. Gardner. Discussion led by Drs. J. W. Taylor, W. C. Strother and J. W. Grubb.

"Sapremia, Report of a Case," by Dr. W. R. Cherry. Discussion by Drs. Render, Wand, Hunt.

Dinner.

"Some Iron Therapy," by Dr. S. B. Hays. Open discussion.

This county is doing a good work, and is as well organized as any in the State.

Notices.

THE AMERICAN ANTI-TUBERCULOSIS LEAGUE.

ATLANTA, GA., U. S. A., Nov. 24, 1904.

To the Members and the Medical Profession :

The American Congress of Tuberculosis (ethical) has been merged into the above association. As you know, there is room for all in this great work, and every one of the old members are requested to help us in making the next meeting a grand success. It will be held in Atlanta, Ga., April 17-19, 1905, in connection with bodies named at the top of this sheet. The Georgia State Medical Association also meets April 17-19, 1905, at same place.

To the humane physicians of America we appeal for their aid and assistance in this great work. If you believe in the golden rule and wish to be among those who are going to carry this work to a successful finish in educating the masses and helping to stamp out this disease, we want your aid and your influence. Can you read a paper at this meeting? If so, forward title to me at once, so I can get out preliminary programme as soon as possible.

Get your doctor friends interested, and be sure to be at this meeting. If you are not a member this is a personal invitation for you to become one, and to help in this work.

Respectfully,

GEORGE BROWN,

President.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The seventeenth annual meeting of the Southern Surgical and Gynecological Association will be held at the Hotel Hillman, Birmingham, Ala., December 13, 14 and 15, 1904. The preliminary programme contains thirty-six announcements of some very interesting papers.

All revisions or additional titles of papers must be sent at once for the permanent programme to W. D. Haggard, Secretary, 302 North Vine street, Nashville, Tenn.

Reduced rates on all railroads of Southeastern Passenger Association may be had.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

VOL. XXXVIII. LOUISVILLE, KY., DECEMBER 15, 1904. NO. 162

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else. *RUSKIN.*

Original Articles.

CONGENITAL DISLOCATION OF THE HIP.*

BY DR. JOHN B. RICHARDSON, JR.

This condition is far more frequent in females than males. Of 671 cases reported by Lorenz 87.8 per cent. were in females, 12.2 in male. Of 500 cases recorded at the Ruptured and Crippled Hospital, 82.6 per cent. were in females and 17.4 per cent. were in males. The reason for this difference is not known. It is more often unilateral than bilateral. Of the five hundred cases at the Ruptured and Crippled Hospital, 64.4 per cent. were unilateral, and in 36.6 per cent. both hips were affected.

The parts involved may be divided into the bony and soft structures. Of the bony parts the acetabulum is usually least affected. It may be quite normal both in size and depth. This is usually the case in infants before the joint has been subject to any strain. On the other hand, even in infants, the acetabulum may be undeveloped and small. In older cases, where the weight of the body has been borne and walking indulged in, the change is more marked. The acetabulum is relatively smaller, and a new acetabulum has been formed on the ilium by the pressure of the head of the femur and consequent irritation of the periosteum. This is not sufficient to form any secure support for the femur. The head of the femur is usually flattened, the neck shortened and angle lessened, producing a form of coxa vera. These changes also become more marked the longer the joint has borne weight. There are also accommodative

* Read before the Louisville Society of Physicians and Surgeons, November 17, 1904.

changes in other bones of the pelvis as there are in the spinal column. There is lordosis and lateral curving of the spine. In bilateral cases the lordosis is increased and the sacrum dislocated downward and forward, causing a change both in the inlet and outlet of the pelvis. This seems to have no marked affect on the expulsion of the fetus, as these women have no great difficulty during labor. The muscular changes are due to the misplacement of the femur and to the results of disuse. The adductors and psoas and iliacus are shortened. The glutei, obturators and gemelli are lengthened and changed in direction.

The cause of this dislocation is not known. Many theories have been advanced, but the fact that the condition occurs with so much greater frequency in the female sex than in males causes them to be of no great importance. The most frequently accepted theory is the defect of development of the acetabulum. This has been disproven. In the new born the acetabulum covers only one-third of the head of the femur; later one-half is covered. This may have some causing influence. Heredity plays some part, as instances are reported of several cases occurring in the same family. Dupuytren relates three families in which several children were affected. In the last edition of his "Orthopedic Surgery," Whitman reports a family of nine children in which three had this dislocation, the order being the third, eighth and ninth child.

The diagnosis is not usually made until the child begins to walk. In unilateral cases the limp is noticed very readily. The body lunges forward in a characteristic manner, due to the shortened limb becoming still shorter when the weight of the body is brought to bear on the elastic capsule. The limp becomes more marked as the patient continues to bear weight. The shortening in young children may be from one-half to one inch. After long use it may become as great as two inches. The trochanter is prominent and above Nelaton's line. The motion is more free than normally, and the trochanter can be pulled up and down with slight manipulation. The head can be rolled under the finger when rotation inward and outward is practiced. Pain in the joint is not usually complained of, although these patients are more prone to injuries from falls, etc. They are usually tired more easily than normal children. These symptoms often increase during growth, but in adult life are apt to become less troublesome, due to the head having formed a new but insecure acetabulum. The muscles of the affected side are usually somewhat atrophied, but the general condition is usually good. In bilateral dislocation, the limp is replaced

by a waddle, known as the "sailor gait." The hollow of the back is increased and the belly protrudes. The thighs are separated abnormally.

There are three dislocations: posterior, anterior and supracotyloid. The posterior is the most frequent. The anterior is the "anterior reposition" of Lorenz, and is considered by him the condition to be desired when a true anatomic reposition can not be maintained.

Remembering the symptoms, the diagnosis is not difficult. The X-ray gives a complete picture of the condition in most instances.

For many years there were no attempts to cure this trouble. Previous to this time trial after trial had been made, with no success. In 1890 Hoffa, of Berlin, used the open method of reduction. Later came the treatment of Lorenz, which caused such a stir in the papers of this country some two years ago. The Lorenz "bloodless" operation consists of replacement of the head in the acetabulum by manipulation. A full description of this operation may be had in Whitman's "Orthopaedic Surgery," page 515. It consists, first of traction, drawing the head down to the level of the acetabulum. The thigh is then flexed to right angle with the body. The adductors are next broken down by forcible manipulation. The thigh is then forced down in abduction to the plane of the body. The third step consists in overcoming the resistant tissues on the back of the joint by flexing the femur until the toes are made to touch the face. Then by hyperextension, the anterior resistance is overcome. Now the pelvis is fixed by one or two assistants, and the thigh is abducted over a wedge of wood, covered by a suitable padding. The apex of this wedge is placed between the trochanter and the acetabulum. This abduction is continued until the head is snapped over the posterior rim of the acetabulum. If, on abduction, the head easily slips from the acetabulum the prognosis for a perfect result is said to be bad. A plaster of Paris spica is applied in this forced abducted position, and the child allowed to walk as soon as it is able. This spica is allowed to remain for six months. A high shoe is placed on the foot of the dislocated side. At the end of six months the plaster is removed. The thigh is then brought down nearer the normal position and a second spica applied. This is worn for three or four months longer. If the spica has been applied correctly there is practically no discomfort from it. The patient usually becomes used to the position, and no complaint is made. Magendie's solution or codeine is always needed to control the pain after the operation.

This is a hurried description of the Lorenz operation. It is beyond me to describe the amount of force required to go through these different steps. You may have some idea of it when I say, without exaggeration, that it requires the combined muscular effort of the operator, most frequently two and always one assistant, and two nurses. Perhaps you may better appreciate this point when I give you some examples of the accidents occurring during this bloodless method.

I have seen four fractures of the femur. One of the upper third, during the first operation, was put up in a spica, and the child placed in bed to await the "nitting of the bone." No doubt a second trial was had at this unfortunate child, who had been enjoying life as much as a perfectly sound one, before Lorenz visited us. On two occasions at the second operation, when the abduction was lessened, the thigh bone was broken, one in the lower third, the other in the middle third. In still another case, where the outward rotation was too great, the femur was fractured in the lower third in an attempt to overcome this outward rotation. These were all placed in correct dressings and allowed to heal. No account, of course, is taken of the rupture of a few small blood vessels in these fractures when the term "bloodless" is applied.

The outward rotation is as much as 60° in many of these cases. Careful massage will reduce this, however, if continued as indicated.

Paralysis of the anterior muscles of the leg is sometimes seen. This most often clears up, although I have seen several cases where a persistent "drop foot" was noted.

In one case, a subcutaneous extravasation of blood occurred, extending from the mammary region above to the knee below. This must have been an injury to an artery of some size for the blood to have found its way to such a distance from the injury. This accident occurred on the same afternoon that the fracture of the upper third of the femur did. Quite an afternoon, two cases, a fracture and a severe hemorrhage. This hip was reduced, however.

The most serious accident of which I am aware was when rupture of the femoral vein occurred. This case was quickly followed by gangrene, amputation and death.

These points can not be overlooked when one is considering the advisability of operating on these cases.

When the dislocation has been reduced the head should be prominent and the femoral pulse should be felt in front of it.

Whitman, in his "Orthoepedic Surgery," says this condition

should be found. He also says, "The first indication of failure is a slight lateral displacement of the head to the outer side of the artery."

In the *Journal of the American Medical Association* of February 27, 1904, is an article by Harry M. Sherman, of San Francisco, entitled, "Report of Two Children Operated on by Lorenz." In this article the writer describes the findings at an open operation done about six months after Lorenz had operated. His description, in part, is as follows :

"The femoral artery could not be compressed between the finger and femoral head, as is normally the case; but the head was recognized external to the artery, and more superficially placed than usual in a position beneath the anterior superior spine." This would seem to be the so-called "anterior reposition" of Lorenz. He continues by saying: "A longitudinal incision was made, internal to the tensor-vaginae-femoris, and directly down to the head. Around the head was a thin fibrous layer, which I first took to be the joint capsule, but which I later found to be only a layer of laminated fibrous tissue, an adventitious capsule. . . . The cartilage of the femoral head, now exposed, was found to be eroded, as if by some absorptive process. The pit for the ligamentum teres was obvious, but there was no ligament. Usually, at this stage of the operation for reduction by arthrotomy I am able by flexing the hip to a right angle, to thrust my finger down to, sometimes through, the constricted part of the capsule, but in this case it was impossible. There was no such open path. Further dissection showed a band of capsule coming from the lower part of the acetabulum, and twisted around and behind the neck; but partial section of this did not open up the way to the acetabulum. Finally the rim of the acetabulum was found and the capsule opened there. It was found that the manipulation in November, 1902, had torn the capsule, had thrust the head through the opening, and left it among the muscles at the outer part of Scarpa's triangle and just beneath the fascia lata, while the trochanter had been crowded into a position internal and posterior to the head, and very nearly into the acetabulum. The acetabulum, once exposed, was found to be very shallow, but the head was easily put into it, or on it, by an inward rotation movement. Very little capsule, however, was left in front of the head, and this was a serious loss."

In most of the cases I examined, after the first plaster was removed the head was found on the outer side of the femoral artery. It would be logical to suppose that the same conditions existed in these cases

that were found by Sherman in his. As is pointed out in this article an intact capsule could bear weight better than one that is torn, and also there appeared nothing which could be counted upon to hold the head in its new position. So it would appear that the operation had done more harm than good.

V. P. Gibney, of New York, in his report to the Board of Directors of the Ruptured and Crippled Hospital, prefaces his remarks upon congenital dislocation of the hip as follows :

"Let it be understood that it is not the time to give final results." He then recounts 33 patients operated upon. Some were double dislocations. Of this number 18 were under 7 years, 11 between 8 and 10, 4 between 10 and 12. He reports 3 as cured, 3 ended in good results. 8 others were reported as in favorable condition, another 8 improved, 5 were still in the first dressing, 1 death. This shows 9 per cent. of cures. Taking the three cases cured and the three having good results, we find 18 per cent. of good results. 3 per cent. of deaths were shown.

Ridlon, of Chicago, in an interesting paper appearing in the *Journal of the American Medical Association*, April 16, 1904, gives 10 per cent. of cures as his experience with 20 to 30 per cent. of failures, the remaining 70, or 60 per cent., being classed as improvements. In this paper the following are given :

Sherman, of California: "I have had only one of the bloodless plan that 'stayed put.' I believe there were about a dozen that were 'put.' With that case I am satisfied. I do no more bloodless operations.

Bradford, of Boston: "All my cases of congenital hip reduced bloodlessly (he had reported on 44 hips in 34 patients) have relapsed except one, about which I am doubtful. It is now two years since the operation, and I have an X-ray that is being developed. It seems to me that the hip has slipped since the previous examination three months ago."

Gibney stated he had had no successful cases by the bloodless method. Whitman, of New York, places the good results much higher than any of the others. He regards 40 per cent. as indicating more nearly the good results following the operation.

There seems a general tendency to condemn the operation by all except Whitman, who is a strong advocate of it.

In justice to Lorenz it must be said that he does not advise operations on children older than seven years. The most of the accidents

have occurred in patients older than this, although I have seen some accidents under seven. Again, the after treatment has been left by him to men who are not as familiar with this as he is himself. This may account for the better results he is able to report.

An operation which shows 10 per cent. of cures with 3 per cent. of deaths, one which is productive of so much trauma and consequent shock, is one which is not to be entered upon lightly. If the anterior repositions would remain where they are put the good results would go up to 40 to 60 per cent. This does not seem to be the case. Looking at this operation from what I have seen, and what I am able to read, I think it is one which should never be used. These children enjoy life as other children. While they have more or less limp, they get about as actively as children who are normal. The few adult cases I have seen are physically in good shape, and they attend to the duties assigned them almost, if not fully, as well as their more fortunate neighbors. Some of these little patients will remain in bed or on wheel chairs the rest of their lives, directly resulting upon the bloodless method.

I have seen three cases after the open operation. They had quite secure hips, a range of motion from about 50° to 75° , and were very active. If any operation is to be done I think this is the one of choice. I question the advisability of any. While the arthrotomy will be classed as a "bloody" operation it is always well to be able to deal with hemorrhage when it occurs. This you are unable to do in the "bloodless" procedure.

Dr. Ap Morgan Vance, of this city, who has seen more of these cases than any other man in the South, says, "Let them alone first, last and all the time." I think he is right.

227 WEST CHESTNUT STREET.

SYPHILIS OR LOCOMOTOR ATAXIA?

BY J. A. FLEXNER, M.D.

The question which constitutes the subject of this paper has been suggested to me by a series of cases which I have had under observation for some years. I take it that there is no longer room for doubting the casual relation which syphilis bears to locomotor ataxia, and in the cases I refer to the history of syphilis was admitted. That the pathologic histology of the two diseases as seen post mortem are

widely different and distinct is generally recognized by pathologists, but the post mortem picture, I contend, does not help the clinician in the diagnosis and treatment of the class of cases to which I refer. I can best illustrate my meaning by the brief resume of a case still under observation.

About four years ago Mr. X., a prominent artist, came into my care for a so-called rheumatism. During his recital of his history he was snatching at a leg or an arm, as his pain struck him. Then lancinating pains interfered with his sleep and work, and in addition he had attacks of vertigo, as he called them, attended by unconsciousness of a momentary nature, and nausea, but no vomiting. He had no fever, no bladder or bowel disturbances, but was sexually impotent. He had lost forty pounds in weight in the course of a few months. There was a typical Argyll-Robertson pupil, the Westphal and Romberg signs were positive, pain sensation was delayed, and there were disturbances of the thermic senses over considerable areas of the back and legs, with points and spaces of complete anesthesia scattered over the abdomen and lower extremities. As stated before, syphilis was not denied, though there could be any connection between his symptoms and his syphilis seems to have been overlooked by his previous physician as well as himself. He stated that he had the initial sore sixteen years before he consulted me, that it did not amount to much, that it had been cauterized, and that for a few months he had taken mercury, iodide of potassium, but had had no anti-syphilitic treatment in the meantime. He had never had any skin eruptions, loss of hair, or sore throat or mouth, and was not inclined to think there could be any connection between his condition then and the slight local trouble which had existed.

Surely here is as complete a clinical picture of locomotor ataxia or tabes dorsalis as one often finds, and not only spinal but cerebral symptoms in common. I had an opportunity later to observe him in one of his attacks of so-called vertigo, and I have no hesitation in pronouncing the attacks as epileptic seizures of the milder variety. There was no history of alcoholism or any of tobacco. I had but recently finished reading Macbins' article on locomotor ataxia in the *Twentieth Century Practice of Medicine*, and I confess it was with some doubts that I placed him on mercurial inunctions and rapidly increasing doses of the iodide. He showed early signs of improvement, and within six months had regained his weight, and was comfortable and able to attend to his duties, which were very trying at times. He has had a

short course of the iodide spring and fall ever since, and last year passed through a severe typhoid fever, making a complete recovery, and to-day weighs more than ever in his life, plays golf, and is in every way, excepting his impotence, as well as any man of his years I know. Another case had, in addition to the bulk of the above named classic signs of locomotor ataxia, the girdle sensation at about the level of the sixth rib, and the improvement in this case has been quite as marked as the case more fully detailed.

The differential diagnosis under the conditions named offers no great difficulties. From multiple neuritis the condition is distinguished by the more acute or subacute course of the latter disease, which reaches its climax after a few weeks or months, and ends rapidly in death or slow convalescence. Again, the condition arises from other than syphilitic causes, is produced by alcohol, or lead, or other metallic poisoning, and the peripheral nerves are more involved than in the class of cases I have in mind. Oppenheim has described conditions which he calls syphilitic pseudo-tabes. But in this class of cases we have the disease extending from the meninges to the cord, and the symptoms of a syphilitic meningitis precede the tabetic signs; and, according to the author quoted, "spinal syphilis follows soon after infection, beginning usually within one year after infection, and in most cases within six years." From multiple sclerosis the disease presents so many points of difference, especially in the age of the cases, that they can scarcely be confused. Given, then, the conditions described, how are we to interpret the attitude of the various authorities with the results I have obtained in these and other cases, and which experience I have no doubt others of the fellows have had? It is true that Oppenheim guardedly states that patients with the history of syphilis may be given the benefit of anti-syphilitic treatment, but he adds that he has never seen it do any good. Moeblins, in the article referred to, states that not only no good has resulted from his use of mercurials and the iodide, but positive harm. Hirt, in his excellent work on the "Diseases of the Nervous System," approaches the subject of a specific treatment in a very cautious manner, and certainly holds out no hope of its success.

Osler states that although syphilis plays an important role in the etiology, it is universally acknowledged that neither mercury nor iodides have as a rule the slightest influence on the tabetic lesions.

On the other hand, Strumpell, in his "Practice," is the only one of the older writers on this subject at my command who has a favorable

word to say of the line of treatment I have pursued, and whose experience bears me out. The later writers, like Leredde, of Paris, and a recent German author, at one of the congresses recently held, whose article has been mislaid, strongly advocate the use of mercury in large doses to begin with, and to be followed by the iodide to saturation.

It is, of course, difficult to reconcile such diversity of opinion among competent observers. The differences in the clientele may be not an unimportant one. It has often struck me as unfortunate that our text book writers are so largely influenced by the usual hospital material which differs in so many vital points from the class of cases which consult us in our offices.

While I think the prognosis in these border line cases ought to be guarded, I still think the hopeless diagnosis locomotor ataxia ought not to be lightly uttered. There must certainly be a large number of cases such as I have described and others who come into our hands with less pronounced symptoms than the cases I have recited which, under appropriate medication, can be restored to usefulness. I purposely omit reference to any system of exercises such as Fraenkle's for the treatment of these cases, and think the question above all to be settled is the one of diagnosis. With the present means at our command, what other tests have we that are at all available outside of the therapeutic ones? That certain degenerations in the cord persist in these cases is, I think, proved by the apparently incurable impotency in the case referred to; but the disappearance of the epilepsy, of the lightning pains, and the restoration of the powers of co-ordination, patellar tendon reflexes, thermic and tactile senses, indicate clearly to me that whatever form of poison is at work, whether bacteriologic or toxin of syphilis, or even a meta-syphilitic poison, as Moebins calls it, the effort not only to arrest the disease, but to restore function, should not lightly be given up. It is especially unfortunate to confuse such cases with rheumatism, and I can not help but think if sufficient attention be given to the history and a careful examination of the patient be made, this error could be avoided. All the authorities refer to the damage done to such cases by the usual treatment such chronic patients receive. The under feeding, the salicylates and alkalies, the crude methods followed at most of our American springs help the progress of the disease, but not the patient.

In closing, I may be permitted to call attention to a conviction which I have long held about these conditions. That the final stage of

locomotor ataxia is the complete degeneration of the posterior column, of the cords and spinal roots, and at times a similar degeneration in the cranial nerves is beyond question, but this stage is in such cases as I have recited reached only slowly, and through the continuous action of the peculiar virus which is of syphilitic origin. When the diagnosis is made sufficiently early and before hopeless destruction has taken place, these cases are practically cases of syphilis of the cerebro-spinal axis, and are amenable to the vigorous use of mercury and iodides, a therapeutic necessity in the treatment of later manifestations of syphilis in any other parts of the body.

1044 Second Street.

Progress of Medical and Surgical Science.

Local Treatment of Diphtheria.—*The Medical Review of Reviews* quotes Dr. James R. Ely from the *Virginia Medical Semi-Monthly*, as advocating local treatment of diphtheria, stating that we have several remedies which, when applied locally, will dissolve the membrane, and two of which will also neutralize the toxins in the membrane and on the abraded mucosa. The toughest diphtheritic membrane will completely dissolve in five minutes when placed in a 5 per cent. solution of lactic acid, and both of these acids neutralize diphtheritic toxins.

Dr. Louis Caine is quoted as stating that when once the bacilli have entered the blood and glandular system that no serum will destroy them, that the antitoxin neutralizes the toxins accumulated in the body and stimulates the growth of Ehrlich's chain of alexines, and that they have no power to prevent anemia and degeneration of nervous and muscular tissues.

It is claimed that if the false membrane can be removed without injuring the sound mucous membrane, the distillery of toxalbumins under this false membrane destroyed all the toxins in and around the denuded mucosa neutralized by local application of lactic acid or tartaric acid, and if after such removal we can render all the mucosa in the nose, mouth and throat aseptic and free from germs, and keep them so, do we not minimize, or prevent, all systemic and serious results of diphtheria?

Dr. Ely suggests that if a solution of lactic acid be applied to the diphtheritic membrane as soon as it forms, that in a little while we can wipe away the dissolved membrane with absorbant cotton on an applicator, and then with a clean piece of cotton dipped in a 4 per cent. solution of formalin swab out all these localities, we then have a perfectly free surface from all kinds of germs.

The struggles of a child can be overcome as in intubation by rolling the child in a sheet and have the nurse hold its head. Dr. Ely's remarks are very interesting from a scientific standpoint, and we hope will prove of value to the profession. Statistics go to prove that this local application is no doubt of great benefit in the treatment of diphtheria.

Vaccinating Under Red Light.—A Hungarian physician, Dr. Hugo Goldmann, has been vaccinating children with the exclusion of chemical light rays. He vaccinated forty children in a room from which the chemical rays had been excluded; the room was lighted by a red lantern, similar to a photographer's dark room. The arms were dressed with red dressings and a sensitized paper placed under the dressings to exclude all the chemical rays. It was observed that the pustules formed as they did originally, but without any inflammatory reaction, the arms were neither swollen nor painful, and there was no systemic disturbance. Reinoculations proved negative. Where the other arm was inoculated in the usual manner, there was pain and swelling and a general systemic disturbance.

In some instances the dressings were removed the second and third days, and the pustule seemed milder.—*Journal of the American Medical Association.*

Injection of Cocain in the Nerve Trunk.—H. B. Gessner, in *American Medicine*, September 14, 1904, reports two successful cases of the injection of cocain in the nerve trunks previous to their division in order to prevent shock. In major amputations, as has been stated by Cushing, the injection of cocain prevents the conduct of those impulses resulting from traumatic injury, which would otherwise act reflexly through imaginary centers, and which is regarded as a cardinal factor in the cause of shocks. Gessner, in his two cases, after completing the amputation, injected the great sciatic and internal saphenous nerves. In the first case the pulse fell from 82 to 62 at the finishing of the operation. In the second case there was a rise in the pulse, due possibly to delayed shock. In neither case was there seemingly bad after effect.

THE AMERICAN PRACTITIONER AND NEWS

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Editorial.

THORACIC SURGERY.

The inaccessibility of the thorax to surgical intervention in the past on account of the almost certain occurrence of pneumothorax, with its attending dangers, even when it is unilateral, and its uniformly fatal ending when it is bilateral, has made surgeons loathe to invade this region in the past, and surgical work in this cavity has been upon very narrow lines. In the *Medical Record*, November 5, 1904, an editorial on this subject, with a review of the work done by v. Mikulicz and in the Pharmacological Institute of Filehne, in Breslau, points to the probable solution of this heretofore difficult surgical problem. The following, taken from *The Record*, sets forth possibilities to be attained in thoracic surgery in the future:

Numerous suggestions have been made by different authors to overcome this difficulty, but without satisfactory results, and though a few daring operators have recorded successful suture of the heart, pulmonary cavities have been drained, and even small portions of the lung resected, in the main the operations have been confined to pleural

conditions such as empyema, and the operators have striven to isolate the proposed field of manipulation either by preliminary injections of irritants to produce adhesions or by suture of the pleura before incising it.

For some time work has been done in the surgical clinic of v. Mikulicz and in the Pharmacological Institute of Filehne, in Breslau, with a view to solving this problem, and Sauerbruch (*Mitteilungen a. d. Grenzgebieten d. Medicin u. Chirurgie*, Vol. 13, No. 3) now supplements several preliminary publications by an exhaustive resume of what has been accomplished.

After an extensive series of observations on animals it was found that all sorts of artificial respiration, whether carried on through the larynx by means of apparatus similar to that of Fell-O'Dwyer or of Matas, or through a cannula inserted directly into the air passages after a preliminary tracheotomy, produced such serious circulatory and respiratory disturbances as to preclude their practical employment. It was further found that the dangers of pneumothorax were mainly due to the collapse of the lung, and this less on account of its functional restriction than owing to other effects accompanying its change in size (congestion, vagus reflex). In order to prevent this collapse the author enclosed the chest of the experiment animal in an air-tight chamber of glass and exhausted the air within slightly by means of an air pump. The hands, introduced through apertures in a rubber sheet stretched over one end of the cylinder, were free to perform the necessary manipulations within while the head of the animal remained outside. Under these conditions extensive operations involving the opening of both pleural cavities could be done without collapse of the lung or any marked circulatory or respiratory disturbance. This plan has been developed by degrees, until now a full-sized pneumatic operating room for human subjects has been built and has been used by v. Mikulicz in operating on ten cases. The construction is of heavy sheet iron, with large plate-glass windows and suitable means for keeping up a constant negative pressure of 10 mms. of mercury, while at the same time fresh air is admitted continuously. The patient's body is within the cabinet, but the head projects through an opening in the wall made to fit closely to the neck by means of a perforated curtain of rubber. Within the cabinet are electric light connections, telephone, water pipes, and the valves and gauges necessary for controlling the air apparatus. In order to avoid disturbing influences on the general circulation the patient's body below the waist is enclosed

in a rubber bag communicating with the outer air. When the apparatus is working the entire chamber, with the operator and his assistants, becomes simply an extension of the patient's pleural cavity ; as soon as this is opened collapse of the lung does not occur, and respiration proceeds normally. No inconvenience is experienced by those within the cabinet, for the decrease in pressure is no greater than that regularly existing at an altitude of three hundred meters. No details are given of the operations already performed, but these will no doubt soon follow, and the surgical world will be enabled to judge of the possibilities of the method.

Society Proceedings.

PROCEEDINGS OF THE LOUISVILLE SOCIETY OF PHYSICIANS AND SURGEONS, NOVEMBER 17, 1904.

DISCUSSION.

Dr. A. Morgan Vance, as the guest of Dr. Richardson, was invited to open the discussion, which he did as follows :

Dr. Richardson leaves little more to be said, and I heartily agree with him that neither the "open" nor the "bloodless" operation is justifiable.

I am sure of one thing, and that is that neither operation is the one to be done in Kentucky; for if a surgeon should do either of them and have as poor results as usually follows such operative procedures, he would have to make hurried explanations into the business end of a .45.

Ever since Hoffa introduced the "open" operation and since the advertising of the Lorenz "bloodless" procedure, there have been many parents who have come to me to have their children "cured." I have always explained the seriousness of the operation, and just what they might expect from it, and in no case have the parents consented to have their child subjected to such an ordeal.

The first case that I remember was about twenty-five years ago, in a patient of Dr. Buckminster Brown, of Boston, where the dislocations were reduced "bloodlessly," but gradually, and were kept in position for three years by apparatus. Afterwards the child came under the care of Dr. Bradford, and he said that the child had a double dislocation. It was from this case that I think Dr. Lorenz got his idea.

The "open" operation is also uncertain, as Dr. Bradford showed me a specimen removed post mortem in which he thought he had reduced the dislocation and found that the acetabulum, but on necropsy it was discovered that he had instead dug a new socket one and one-half inches above.

After all, it is best to let them alone, as they grow to adults with but a slight limp, and the women are able to bear children without any great risk to mother or child. As an illustration of just how the laity feel toward this operation I can hardly do better than to relate the experience of Dr. Cecil. A father living in the country brought his seven-year old child to Dr. Cecil, and together they took it to Dr.

Lorenz to see if he could promise anything. In justice to Dr. Lorenz I will say that he was perfectly frank regarding the great risk, and did not hesitate to explain just what the child would have to go through with. The father would not consider the operation, and declared that he would not think of subjecting his child to such a procedure.

Dr. Asman: I certainly agree with Drs. Vance and Richardson in what they have said. I might also remark that I saw several operations performed in the Lorenz Clinic in Vienna, and was greatly impressed with the cruelty of the operation, though the parents seemed to have the utmost faith in the final results.

Dr. Bizot: I certainly appreciate the opportunity of hearing such a most interesting paper, surely the best one I have listened to for some time, and it is a double pleasure to have Dr. Vance with us to lead the discussion.

I have seen two cases of congenital dislocation, but have made no attempt to treat them, and should I consider the advisability of doing so I shall certainly handle them as if they were hot iron. Further, before proceeding, I should hold consultation, and seek the opinion of such men as are here to-night.

Dr. B. J. O'Connor: While in Vienna I attended the Lorenz Clinic daily for three months, and took a course under Professor Lorenz. During that time I saw about thirty cases, and have some notes on eleven of these cases.

The technic of the operation, as I saw it, was the following: In the posterior dislocation, which forms the vast majority of these cases, the thigh is hyperflexed on the abdomen, then pressure is applied downwards along the longitudinal axis of the femur, pushing the head towards the acetabulum, the thigh still in hyperflexion is then strongly abducted and externally rotated, and the head usually slips over the edge of the acetabulum into its socket.

Dr. Lorenz now places a padded wedge under the pelvis between the trochanter and the crest of the ilium, and with this as a fulcrum and the femur as a lever he grasps the thigh just above the knee, and by pressing intermittently downwards he thus elevates the head of the femur and stretches the anterior part of the capsule until the head is felt prominently in the inguinal region. This leaves the thigh still flexed in extreme abduction and at a right angle to the body, a position with which we are all familiar as the "split." Plaster is then applied in this position, which is maintained for from six to twelve months. Subsequently the thigh is gradually adducted towards the median line,

and a second and a third plaster applied in these new positions, until about the eighteenth to the twenty-fourth month, when the leg reaches almost perfect alignment, and the child is allowed to walk. At night the child sleeps in a plaster maintaining the first position, and during the day wears a thickened sole under the healthy foot.

As to complications and results of the operation, there is almost invariably some shortening and slight limp. Relaxations are always liable to occur unless the after treatment is fully and carefully observed. In the major number of cases a new socket just above or anterior to the old acetabulum seems to form, usually between the crest of the ilium and the old acetabulum; in these cases the function is not impaired, and the result is regarded as a good one. Dr. Lorenz claims that there is not much injury or trauma to the parts; that occasionally small hematomas arise, but that he has never seen an abscess.

He says the position is not a painful, but on the contrary a humanitarian one, as it places the adductor muscles at perfect rest and prevents spasm and pain. I saw only one case of fracture to the femur during these manipulations.

I remember seeing, at the clinic, two cases of congenital dislocation of the hip, aged respectively twenty and thirty-five, which had never been treated. Muscular spasm and pain were present in both cases. Dr. Lorenz advised that these cases be treated by immobilization with plaster just like cases of coxitis, and a heavy sole placed under the foot of the healthy side.

There is always some pathological condition or deformity in these cases either of the acetabulum or of the head of the femur, and I believe it is the reaction from the trauma following these operations which largely influences the rapid deposit of fibrous and bony tissue, and tends to give comparatively better functional results than in the untreated cases.

Dr. L. P. Spears: It is a well known fact that the American people are more inclined to take up 'fads,' and would rather be buncoed than any other nation in the world. The term "bloodless" is a misnomer for this operation, and possibly accounts a great deal for their susceptibility on this occasion.

Many intelligent people think from the term that Professor Lorenz can do any kind of surgery, such as removal of fibrous tumors of the uterus without the use of the knife or without the loss of blood. This comes from the perusal of yellow journals which gave Dr. Lorenz such notoriety in connection with this operation, but would like to say

in justice to Lorenz that this notoriety was not his fault—he acted with remarkable moderation under the circumstances, and is to be commended for it. I saw Dr. Lorenz operate on several of these cases of congenital dislocation, and if ever surgery simulated butchery, in my opinion, these were fair examples, and if some of the parents who say, “No knife shall be used on my children” could see the manipulations necessary to do this so-called “bloodless” operation, they would rapidly change their minds in preference to the knife. The manipulation is so strenuous that the skin and soft parts about the groin and perineum are torn in many instance. After the replacement has been made to put them up in plaster in that position for six months, perhaps only to be replaced for another indefinite period, coupled with the accidents tabulated by former speakers and the uncertainty of benefiting the child in the end, leaves me to draw but one conclusion: the end does not justify the means.

Dr. Richardson (closing): I greatly appreciate the thorough discussion which has been accorded my paper, and I have endeavored to speak of only what I have seen. I saw Dr. Lorenz operate on only two cases, as I got to New York rather late, and when he was almost ready to sail. In the cases that I saw there traction was first used, followed by flexion, etc., and I can not see how it is possible to put the head in the acetabulum unless you use traction, as the head is above the acetabulum, and it is imperative that traction be made in order to bring down the head.

Referring to the remarks of Dr. Spears, I would say that I saw one case reported in which there had been a complete tear through the vagina into the rectum.

PROCEEDINGS OF LOUISVILLE CLINICAL SOCIETY, NOVEMBBR 8, 1904.

REPORT OF CASES.

Dr. Leavell: I wish to show these specimens. A child about three years of age came to my office the other night, and his mother stated that he had vomited these seeds two weeks ago. She asserts positively that he had not had any apricots or cherries, which these represent, for at least two months prior to that time. He suffered from stomach trouble, but since he has gotten rid of the seeds he has had no further trouble. That is rather unusual, I think, if it can be true.

Dr. Ed. Grant : I do not see any reason why they should not have remained in the child's stomach a long time. I have known people to swallow tacks, pieces of glass, eat lamp chimneys, and all these things remained in the stomach until they finally destroyed life, and post mortem examination showed them in the stomach. I would have expected that these seeds would have passed through the pylorus.

Dr. Flexner : I would like to ask if the child has a dilated stomach?

Dr. Leavell : No, the child has no dilated stomach. I have nothing further, except that it was peculiar that such small bodies should remain in the stomach. His mother was absolutely sure that he did not get hold of anything of this nature for at least two months prior to vomiting the seeds.

Dr. Coomes : I would like to report a case out of the ordinary—a case of double glioma in an infant less than a year old. It is rather an unusual thing. I saw this infant first about six months ago, and the mother was unwilling to allow me to make a thorough examination. I noticed that the child was unable to see. Later the child was brought to my office with the peculiar characteristics of glioma, and I removed both eyes. The child has had no trouble since.

In new born infants I have seen three cases where it was located in a single eye, and I removed the eye, but this is the first case of double glioma that I have seen.

Dr. Allen had the specimen, and said from the examination there is no doubt of the correctness of the diagnosis.

The growth had broken down in one eye and the other remained intact. I report the case because of its being unusual.

Dr. Cheatham : I do not think this diagnosis is made without the use of the microscope.

I had a family up on Jefferson street, the case of which Dr. Flexner made a report, and there were three with double glioma. It was a large family. There were five or six healthy children, then a child with glioma, which broke out in other parts of the body, then another child with glioma, two healthy children, and another child with glioma.

I remember a very rich family in Brooklyn, married eighteen years. The first child born was six months old when we removed one eye, and at twelve months we removed the other eye, the child living twelve months afterwards.

I do not think the doctor's diagnosis is made out here. Gliomas

do not often break down and take that course.

Dr. Griffiths: It is a rare case, and ought to be reported in full.

Dr. E. S. Allen: I made a microscopical section of these tissues, and so far as I could detect the same growth involved both eyes, and seemed a typical gliomatous or cancerous condition.

Dr. W. H. Wathen: I wish to report briefly three cases I have recently had with fecal fistula, two of them the result of traumatism and the other post operative, two years after a laparotomy which probably was tubercular.

In the first case the patient had two fecal fistulæ on the left side of the median line about three inches, and communicating with a sinus apparently from a casual examination. Before the operation there were two openings in the bowel. When the abdomen was opened and the infectious area cleansed, the intestines were separated with the mesentery for almost the entire length of the ileum. It was then found that there was one opening in the ileum as large as the end of my thumb. This was sutured, and the patient made an uninterrupted recovery and is now strong.

The operation was apparently contraindicated from her very poor state of health, having taken large quantities of morphine, and having grown very anemic and very thin.

In the operation there was found tubercular infection in some of the lymph nodes in the mesentery.

The next case was one referred to Dr. ——— and myself, where a man had been struck over the ribs on the right side in the region of the liver, who two weeks afterwards had a large phlegmonous mass, and when he came to us there were several sinuses looking something like the openings into a carbunculous mass. Fecal matter and pus were coming away in great quantities, and the patient was in a very feeble condition, with an odor that filled the hall of the hospital when he entered.

The phlegmonous mass was incised transversely and at right angles and the flaps laid back, and there was then a rosette of the mucous membrane of the bowel larger than a half dollar. When the infectious area was cleansed the adhesions, which were very tough, were separated from around this fecal fistula, and in the examination it was seen that there was a spur in the center of this such as we see following colostomy. The finger would go into the proximal and distal end of the bowel. When the bowel was entirely separated and viewed externally it was found to be the hepatic flexure of the colon, and it had

formed a hernia between the outer border of the rectus, had sloughed through half the thickness of the bowel. This was sutured by a double suture internally with cat gut and externally with silk. The border of the muscle was sutured to the costal border. The patient, I think, would have gotten well if he had gotten out of bed the first day.

A more unfortunate case was one I was called to see in Mayfield six weeks ago, where a boy two weeks before, while riding a bicycle, had been run into, the shaft tearing an opening in the left inguinal region, which was sutured, and the boy did well for about ten days, when a fecal fistula developed, and when I saw him there was a great deal of pus and fecal matter coming from the wound. The boy had no elevation of temperature, good pulse, and was really in a very good condition.

I opened the wound widely and packed it with gauze, telling them to allow the boy to come to the city and be operated on within a few days, or as soon as the wound got into a healthier condition.

Two or three weeks after that a doctor from Mayfield was in the city, and told me that the fecal fistula had about closed.

I received a letter yesterday from the physician in answer to one that I had written, saying that there had developed another fistulous opening in the left hip, dissecting up the tissues and coming out through the buttocks, and that the boy had become very much emaciated, and was probably now not in a condition to be operated on.

This case I am sure could have been entirely cured had he come to the city within a few days, when the wound was in a healthy condition, by cleansing the wound thoroughly before opening the abdomen, getting away the septic matter and pus by persistent gauze sponging, which removes this better than anything else, and then by opening the abdomen in a vertical direction to the right of the wound and separating the adhesions through that opening.

Now, it is my opinion that we could have cured this boy by only suturing the wound in the intestine; at least, I am sure we could have done so by a resection, and I believe this boy will simply go to an untimely grave because of the lack of surgical interference.

These wounds in the intestines forming fecal fistulae from traumatism or as post operative results are, as we now know, very easily cured. Formerly we did not think so, and we hesitated to open the abdomen; but now if we open the abdomen in time these cases, with few exceptions, make uninterrupted recoveries, most of them getting

well even if we are compelled to make a resection of the bowel.

Dr. Griffiths: What part of the bowel was involved in the last case?

Dr. W. H. Wathen: The ileum.

Dr. Bullitt: I was very much interested in the doctor's report, especially in the cases he reported following trauma.

I recall a case just in line with one he mentioned where a woman had been run into and injured by a buggy shaft. She was riding a bicycle just as in the case of the boy reported. There was no wound produced in the skin. It was simply a bruise. She remained four or five days in the hands of a competent practitioner, and then phlegmonous infection appeared in the side, and the woman's condition became serious, and she was referred to a surgeon. She was operated on at once, the condition of the wound being like that of the second case reported by Dr. Wathen.

This woman sustained an injury in which the abdominal muscles were torn through without an open wound on the skin, and there was a hernia of the bowel into this opening between the muscles. It was not a direct injury of the bowel, but the hernia became strangulated, and when the bowel had broken down, infection in the neighborhood took place. This woman died within forty-eight hours, and the post mortem showed the abdomen clear of infection. It was one of those cases in which the operation was a success, but the patient died. She died from septic absorption from the infection of the abdominal wall.

The lesson I gather is the one Dr. Wathen called attention to, that injuries of this kind are serious, and the salvation of the patient frequently depends on the early surgical procedures instituted.

Dr. G. W. Griffiths: I just want to say this case was the most unpromising case for operation I ever met with, and certainly the most disgusting. The man came here at night. On entering the door the odor was something terrific. The whole abdomen and breast were bathed with fecal matter, which was continuously pouring out. One thing in his favor was that he was seventeen years old, a pine knot of a boy. It was a punctured wound, also a wound made by the surgeon's knife before we saw him, the boy falling against a sharp stick, and three weeks after the accident the boy fell into my hands. I never saw a case progress more rapidly. The boy went home, and in spite of all the doctors could do he got well.

Dr. Griffiths: I attended an operation at Christ Hospital, Cincinnati recently, and I was struck with an armless sack or sort of an

apron that all of the visitors wore. The deaconesses and everybody had a sack with a drawstring at the neck. This extended down below the knees. The visitors would go in and take off their hats and wash their hands, and then put on one of these sacks. In this way there was no interference with the patient, or the instruments or rubbing up against the surgeon or assistants.

Another thing I noticed there was perfect quiet. There was no noise of any kind. You have no idea of the moral effect of getting in there.

I was very much struck with that sack, and it seems to me that it was an idea that ought to be introduced everywhere.

One of the doctors told me that a patient had been killed by a visitor interfering with the instruments, and that was the origin of the "hands off" sack.

Dr. E. S. Allen: I enjoyed Dr. Flexner's paper very much. I do not see how the iodide of potassium and mercury can do much good in locomotor ataxia, because it is not a syphilitic condition of the cord, but a primary degeneration caused by a toxin, and as it is not a syphilitic condition of the cord the iodides can really do no good in the treatment.

Where a sclerosis has taken place I hardly see how the nerve can resume its functional condition of controlling certain centers. When the degeneration takes place as a result of the syphilitic toxin, nature attempts a repair which results in the formation of fibrous tissue or sclerosis, and as this new tissue begins to contract, nutrition of the nerve fibre is interfered with, and a further degeneration takes place.

Dr. Ed. Grant: I enjoyed the reading of the paper very much, and can only speak from my experience in the management of locomotor ataxia. I am under the impression that the iodides do very little good in most cases, but I always feel inclined to try anti-syphilitic treatment, for that is the cause of the trouble in many instances.

I was reminded, when he came to that part of the paper which referred to the use of iodides, of a lecture I heard Dr. Austin Flint deliver on the iodide of potassium; he said that if the time ever came when he would worship any idol he would set up a bottle of potassium iodide. One of his favorite axioms, to which he often referred, was: "When you are in doubt give the iodide of potassium."

Dr. Weidner: I enjoyed the paper very much. When Dr. Flexner called me up this evening I told him that I did not think I could be here, and he said he wanted me to be here to rip him up the back.

I agree in the main with what Dr. Flexner has said. He took the standpoint that syphilis is in most cases the cause of this trouble. Erb, according to the latest statistics, finds that in 95 per cent. of this disease a syphilitic history has been given.

Dr. Flexner has pointed out in a casual way that it is characteristic of the disease to affect the different sensory neurons. The disease, as you all know, is recognized more to-day as a degeneration of the entire sensory neurons, affecting mainly the posterior ganglia, which is the trophic center, both peripheral and central filaments passing out from the ganglia. Not only are the spinal neurons affected, but scattered cerebral ganglia and neurons are affected, and I think he mentioned this in connection with his patient.

To illustrate what I speak of, there is a well known condition of the optic nerve, optic neuritis or optic degeneration.

As to the specific treatment, I have taken the same view as Dr. Flexner, though many authors state that there is no value in the specific treatment. In my own experience I have in mind a case that showed the effect so markedly that after that I made up my mind always to try a thorough syphilitic treatment. I recall one case in a hopeless condition, unable to govern his movements at all; that ataxia not only involved the lower limbs, but he had the pupillary symptoms as mentioned in your case and the upper extremities were also involved. He had to quit his business. That man improved wonderfully, so that he could go back to his work. The mercury used by inunction and followed by the iodide of potassium made a strong impression upon him.

Dr. Allen has pointed out that we have two processes recognized by pathologists as going on in this disease. The one is a process that resembles the sclerotic process, a process of chronic interstitial inflammation; the other one purely degenerative, may be the second depending to a certain extent upon the first. If we can check this inflammatory process as well as the formation of fibrous tissue by our treatment with the iodide of potassium that would explain some of the good results that seem to follow the use of this drug. To this retardation of this cellular formation into fibrous tissue ——— claims the good effect of the iodide of potash in hypertrophied cirrhosis of the liver.

In the other cases I have had the specific treatment seemed to do no good whatever, and it might be that we had degenerations there that were not affected by the treatment at all.

One point I would like to add here, that it is remarkable how some

cases will run along without any treatment, and will come to a standstill. A patient presented himself at the City Hospital several years ago with all the classical symptoms in every way of this disease, and he is going around to-day, and seems to be in as good condition as several years ago. He has been without treatment.

Dr. Cheatham: The first diagnosis of these cases, as you all know, are made from the symptoms of paralysis of the external rectus and atrophy of the optic nerve. Atrophy of the optic nerve precedes the other symptoms for many years. As the doctor has mentioned in other symptoms, the optic nerve reaches a quiescent stage and remains that way for years.

The iodide of potash is spoken of by some authorities as doing good in certain stages of locomotor ataxia. I do not think anybody can tell in three or four years that locomotor ataxia is well. We know that it has periods of rest. One of our physicians in Louisville reported that he was curing locomotor ataxia with a gold preparation. One of our leading judges was reported as being cured. The disease was arrested; no cases are cured. There was a period of rest incident to that gold treatment as we have in the use of the iodide of potash. I do not think that in three, or four, or five years we can say it was relieved.

I recall the case of an army officer who was sent here for treatment. He came from St. Louis. He had double vision. There was absolute rest of four years without symptoms. He went back to St. Louis and had three years rest. Had double vision again, then absolute prosis and paralysis of the external rectus muscle, and finally died. That man had rest for four years, and it is impossible to say when locomotor ataxia is cured. Do not know how it is, but all the functions of the cord had returned to their former condition; the double vision and the paralysis of the external rectus muscle had disappeared for four or five years, and then the disease became active again. I do not know how anybody can state positively that locomotor ataxia has been cured.

Dr. Marshall: Syphilis simulates so many things that we are often mystified by it, I think. I know from my work in the clinics that the skin diseases that were simulated by syphilis were hard to differentiate from syphilis itself. I think that possibly many of the nervous manifestations that we think are due to syphilis are classed by the wrong name.

I have seen syphilitic cases run for over ten or twenty years. I have one woman that comes to me periodically. Her trouble becomes progressive when she has had no treatment for three or four months,

and then with anti-syphilitic treatment she will go along fairly well and seem to be in pretty good condition, only to return in three or four or five months for further treatment.

Dr. H. N. Leavell: Dr. Flexner has stated that we have quiescent stages of the disease. During these stages we may be led to believe we have cured the disease. I do not think that the iodides and mercurials have ever cured a case. When we take into consideration that we have a degeneration of the posterior ganglia we can see how little can be accomplished by treatment.

It must be treated as a nerve degeneration. I believe that the good we get from the iodides and mercury is temporary, and is accomplished because we attack the syphilitic virus, and to that extent we get rid of the cause.

Dr. Bullitt: I am glad to have the opportunity of saying a word to Dr. Flexner's paper. I wish I could feel sure that he has cured a case of locomotor ataxia. I do not feel so convinced. I do not feel that any of us would be suddenly convinced. It has been proven that locomotor ataxia has quiescent periods and the symptoms recur later. In this connection it does not seem that this theory is a plausible one, that is, that the patient whose history has been detailed by Dr. Flexner is in the stage of quiescence. Quiescence ordinarily would mean that the disease has reached a certain stage and would later progress further. Cure would mean that the symptoms have ceased, that actual relief has been attained. That is what Dr. Flexner has reported, that the man has none of the symptoms of this disease, that all of them have disappeared.

Quite a small percentage of syphilitics develop this disease, while quite a large percentage of locomotor ataxies have a history of syphilis. A syphilitic history is often given by men who in all probability have never had syphilis. I believe that a history of syphilis in doubtful cases is an unreliable factor.

I said to Dr. Flexner coming in on the car that the weak point in his case was that he did not know what would have happened to this man if he had not had the iodides. Many men who have had a large experience with these cases are of the opinion that no such effect could be produced by anti-syphilitic treatment. I confess that I am still skeptical, and shall have to wait until other cases have proven what Dr. Flexner states he believes to be true.

Dr. Irwin: The essay appears to me to be of double interest; in the first place, I have never seen such a case in a practice of thirty

years; in the second place, the cure resulting surpasses anything I have ever seen. I have never seen all the symptoms occur so early. The loss of the sexual power and the knee jerk so early is remarkable. The evidences were the Argyll-Robertson pupil, distress in the legs, local anesthesia, constrictions of the chest and so on; these symptoms had been present for six months. I have never seen a case like this cured, for the reason that when so many symptoms are present degenerative changes have taken place in the columns of Goll.

Todd, of England, was the first to describe progressive locomotor ataxia, and from that day to this there has never been a case cured.

Erb, Gowers and others agree that in the vast majority of the cases of locomotor ataxia there is a preceding syphilitic history. Think of the number of men who have had syphilis and got well, some of them not properly treated at all, the disease running its course and showing no evidences of locomotor ataxia. I think there is something more than syphilis which enters into the causation of tabes dorsalis long before the Argyll-Robertson pupil appears, and long before the loss of sexual power is present. An early symptom is increased sexual power, and the reflexes are also increased. Only after degeneration has taken place do all the symptoms appear which the essayist has described.

In my own experience inflammatory diseases of the cord and syphilitic gummata of the brain and cord will give rise to the symptoms described, and if the case has been cured by the use of mercury and the iodide of potassium, and it was a case of locomotor ataxia, the essayist deserves to have a monument erected to him as the first man who has effected a cure. I would not detract from what he has said, but it seems to me there must be some mistake in the symptoms, for surely there could not have been degenerative changes in the posterior columns. Degenerative changes stop from time to time without treatment.

I recall the case of a gentleman who lived in this city twenty years ago; he had had syphilis, and had infected one of his children; he was gradually progressing downward, when some one promised to cure him by developing all of his muscles. He was not cured by the method employed, but had a period of rest. Later the attack came on worse than ever. This is the usual history of other cases I have seen in the last thirty years.

Dr. Flexner: I thank the gentlemen for their discussion. Before the point escapes me I want to correct one statement of the Chairman in particular about the Argyll-Robertson pupil. The poison is a

soluble poison, and attacks areas in the cerebral cortex, and may extend from the cerebral cortex to the cauda equina. There may be not only an inflammation of the cerebral cortex, but of the spinal cord at the same time.

I only want to say that the title of my paper was a question. I asked syphilis or locomotor ataxia? and I have not stated positively that I was treating a case of locomotor ataxia. I wanted the discussion to bring out whether it was a true locomotor ataxia or a case of cerebro-spinal syphilis. If the text book descriptions are to be taken as a standard this symptom complex shows that it was a case of locomotor ataxia, and that he got well under mercury and the iodide of potash.

Spinal syphilis usually attacks the meninges first. There were no meningeal symptoms in this case nor in some other cases I have seen. I know very well that there are lapses in the course of locomotor ataxia, as Dr. Bullitt has stated. This has not been simply a lapse; this man has shown in every way a relief of the diseased process with the exception of his impotency. That is the hardest of all to cure, and I doubt if there is any cure for that.

The lancinating pains and the syphilitic epilepsy have disappeared, and have been gone for years. This man has had a severe trial, having gone through a serious case of typhoid fever. You can take either dilemma, gentlemen. You can say that I was treating the case and he simply got well, or that locomotor ataxia has been cured, and that I am going to get the monument.

One thing is to be learned from these cases—that in spite of the clinical evidences above given the patient may be benefited by treatment such I have advocated here. If not locomotor ataxia, and it is syphilis in any form, you can do a great deal of good if you only give them three or four years of comfort. I do not think the iodides could be objected to under the circumstances.

DISCUSSION OF DR. WILLMOTH'S CASE.

Dr. Weidner: I would only suggest that we have to deal with some other condition that has started up in the medulla of the femur. From the remarks he has made I do not think there has been a direct extension.

Dr. Willmoth (closing): This man, so far as we could tell, has suffered no pain from the involvement of the femur.

Dr. Irwin: I was called two weeks ago, in a hurry, from my office

to see a child on Fifth street that was reported to have taken poison. I was shown up stairs, and found a baby eleven months old in profound stupor, with the pupils of the eyes so contracted that I could hardly see that it had any pupils.

The mother stated that the child had been lying on the bed beside the grandfather, and that the grandfather carried with him morphia pellets, half grain each, for his own use when he felt like it. The child was always putting things in its mouth, and some time between four and six in the afternoon it had taken one of these pellets. The mother had tried to arouse it and could not.

The child was almost unconscious. I sent to the drug store near by and got some yellow sulphide of mercury, and pushed two grains in a little syrup into the throat. In a little while there were some evidence of reflex action. A few minutes later I injected into the child hypodermically $\frac{1}{100}$ of a grain of sulphate of atropia. From the pale, cold, clammy condition which the child was in at this time a few minutes later there was a change to a pinkish color. I can count the pulse rate to 170, but I could not count as rapidly as it was beating. In a short time after the injection of the atropia, possibly in ten minutes, the child vomited, throwing up a lot of mucus, which seemed to give it some relief. I then gave it in solution two grains of permanganate of potassium, in divided doses, by the mouth, and ordered two grains more to be given during the night. The pupils soon began to show the effect of the atropia, and the child is well to-day. The child had taken a half-grain morphia pellet nearly an hour and a half before I saw it, and nearly all of it must have been absorbed.

Dr. Flexner: What was the number of respirations?

Dr. Irwin: I can not say. The respirations were increased and shallow.

Dr. M. F. Coomes: That reminds me of an experiment I made with a dog several years ago. I was convinced that if we had an antidote for morphine it was atropine. I gave this dog, which was a large St. Bernard, the equivalent of one hundred and sixty quarter grains of morphine hypodermically. In eight minutes after it was administered the dog could not turn over, and it looked to me that he was going to die. I forget the exact amount of atropine I used at the first injection, but it was four or five minutes before the dog began to show any evidences that he was going to recover at all. Within twenty-five minutes the dog was able to get up and walk around.

After his recovery he became an enemy of the *genus homo*, and

would never allow any one to put their hands on him.

It was remarkable, and I became convinced that if there was any antidote for morphine it was atropine.

Children appear to bear large doses of atropine better than adults.

Dr. Cheatham : I would like to know why the doctor did not use apomorphine.

Dr. Irwin : I had no apomorphine with me ; and, in fact, I did not think of it.

Dr. Cheatham : We overestimate the poisonous effect of atropine. The books give the dose entirely too small, because atropine has been taken in a large dose by Dr. Bullock here with recovery.

Atropine was given a sister at St. Joseph's Infirmary by mistake. I tried the solution on myself, and with it I dilated the pupil, and I am sure it was atropine, and I think the poisonous effect of atropine has been overestimated.

